THE
PALESTINE EXPLORATION FUND

NOTES AND NEWS.

With this number is completed the "Survey of the Jaulân," by Herr Schumacher. The work was originally executed for the German Palestine Exploration Society, and published in their "Zeitschrift." We have been enabled to translate it by the kind permission of the Committee of that Society, and have obtained from Herr Bädeker all the blocks for the illustration of the work.

It has been printed with large margins, so that while it is uniform with the *Quarterly Statement*, and may be bound up with that journal, subscribers may detach it and have it bound in the same form and size, and with a similar cover, as Captain Conder's works.

The Committee will be happy to exchange bound copies for the unbound copies presented with the *Quarterly Statement*, at the price of 1*s.* 6*d.* each, to cover binding and postage.

With the July or the October number will be presented Herr Schumacher's Survey of Pella, the city to which the Christians fled on the outbreak of the troubles in Jerusalem. There are many drawings and plans to accompany this memoir.

Herr Schick follows up his paper on the discovery of Constantine's Pavement with Notes which demand careful attention. Sir Charles Wilson has added remarks upon these Notes, which separate theory from fact. It is greatly to be hoped that the Russian Society will carry on this work, which is upon their own ground. The discovery of the two pavements, the supposed ditch of the second wall, the granite columns, open up questions of the highest importance.

The List of Old Testament names and identifications was issued last year. That of New Testament names, which contains the references in Josephus to the New Testament places, is nearly ready. It will be issued before the end of April. Subscribers can have copies of the latter, separate, at 1*s.*, and of the two together, in paper cover, for 3*s.*, and bound for 3*s.* 6*d.*, by application to the office only. To the general public the price of the book will be 6*s.* 6*d.*

Meantime, with the view of clearing off the MSS. which await publication, the Committee have resolved on issuing an edition in form similar to, and uniform with, the "Survey of Western Palestine," of the following works: —

1. Conder's "Survey of Eastern Palestine," so far as completed. The MS. is very voluminous, containing as much as will make a volume equal in size to those of the "Memoirs" in the "Survey of Western Palestine." None of it has been published; the drawings are very numerous, and of the deepest interest to the student of prehistoric monuments, as well as for the illustration of the Bible.
2. The Archæological Mission of M. Clemont-Ganneau, with the drawings of M. Le Comte.

   These drawings are many hundreds in number, and executed in the finest style. They figure a vast number of monuments and ruins not in the "Memoirs."
3. The Flora and Fauna of the Wady Arabah, by J. Chichester Hart, Esq., accompanied by many drawings of plants, &c., in the best style.

The editions will be limited to 500. The first 250 subscribers will pay seven guineas for the three volumes; subscribers to the "Survey of Western Palestine" will be privileged to have the volumes for this sum. The price will be raised, after 250 names are received, to twelve guineas. The Committee *are pledged never to let any copies be subscribed under the sum of seven guineas.* Mr. A. P. Watt, 2, Paternoster Square, is the agent.

The Director of the Palestine Pilgrims' Text Society promises the following works for the year 1888:—

The Pilgrimage of the Abbot Daniel—now ready.

The Norman-French Description of the Holy Land and of Jerusalem—ready in May.

The Travels of Nasîr-i-Khosrau, translated by Mr. Guy le Strange—in June.

Arculfus de Locis Sanctis, translated by Rev. R. Macpherson—in June.

Two Letters, from Sir Joseph de Lancy, Knight Hospitaller, to King Edward the First, endorsed "News from Syria," and from the King to Sir Joseph.

The Report and Balance-sheet of this Society for the last year are now ready. Readers will note that the library it is forming of pilgrims, geographers, and historians is quite unique, and cannot be procured except by subscribing to the Society.

The friends of the Society are earnestly requested to use the "Memoirs of Twenty-one Years' Work," as a means of showing what the work has been, and what remains to be done.

An announcement was recently made in the papers to the effect that, among the Sidon sarcophagi, was one containing the body of Alexander the Great. So far the news is not confirmed, and there seems every reason to doubt the fact, unless the details given by the historians are all wrong.

Subscribers are very earnestly asked:—(1) To pay their subscriptions early in the year—say in January. (2) To pay them direct to Coutts and Co. by a banker's order. (3) If they would rather choose their own time, to send up their subscriptions without being reminded. The Clerical Staff of the Society is small; it is most desirable not to increase it; and if these simple requests are attended to a great saving of clerical labour, postage, and stationery is effected. For instance, there are, say, 3,000 subscribers. If every one of these waits to be reminded, and has to have a receipt sent to him, the Society has to spend £25 a year in postage, and to write 6,000 letters, merely to ask for and to acknowledge the receipt of the subscriptions.

The following books are now published uniform in size and appearance :— Conder's "Tent Work;" Conder's "Heth and Moab;" Schumacher's "Across the Jordan;" "The Memoirs of Twenty-One Years' Work;" Conder's "Syrian Stone Lore;" Conder's "Altaic Inscriptions," and Schumacher's "Jaulan." Subscribers can have the whole set, together with Hull's "Mount Seir," and Names and Places, for 32*s.*, carriage free.

Mr. Armstrong has prepared a list of the photographs belonging to the Society arranged alphabetically according to those Bible names which are illustrated by views. This list is now ready. Those who wish for a copy may send in their names.

The income of the Society, from December 14th, 1887, to March 21st, 1888, inclusive, was—from subscriptions and donations, £492 3*s.* 3*d.*; from all sources, £971 12*s.* 1*d.* The expenditure during the same period was £864 15*s.* 5*d.* On March 23rd the balance in the Banks was £328 6*s.* 6*d.*

Subscribers who do not receive the *Quarterly Statement* regularly, are asked to send a note to the Secretary. Great care is taken to forward each number to all who are entitled to receive it, but changes of address and other causes give rise occasionally to omissions.

While desiring to give every publicity to proposed identifications and other theories advanced by officers of the Fund and contributors to the pages of the *Quarterly Statement*, the Committee wish it to be distinctly understood that by publishing them in the *Quarterly Statement* they neither sanction nor adopt them.

The only authorised lecturers for the Society are—

(1) Mr. George St. Clair, F.G.S., who has lately returned from his Eastern tour, and is giving Lectures for the Society in all parts of Great Britain. His subjects are—
   (1) *The Buried City of Jerusalem*, and General Exploration of the Holy Land. Numerous diagrams.
   (2) *Buried Cities of the East.* Numerous diagrams.
   (3) *Sight-seeing in Palestine.* Lantern views, where local help can be obtained.

   Address: G. St. Clair, Bristol Road, Birmingham; or at the Office of the Fund.

(2) The Rev. Henry Geary, Vicar of St. Thomas's, Portman Square. His lectures are on the following subjects :—
   The Survey of Western Palestine, as illustrating Bible History.
   Palestine East of the Jordan.
   The Jerusalem Excavations.
   A Restoration of Ancient Jerusalem. Illustrated by original photographs shown as "dissolving views."

(3) The Rev. James King, Vicar of St. Mary's, Berwick. His subjects are as follows :—
   The Survey of Western Palestine.
   Jerusalem.
   The Hittites.
   The Moabite Stone and other monuments.

(4) The Rev. James Neil, formerly Incumbent of Christ Church, Jerusalem.

TREASURER'S STATEMENT.

Subjoined is the Balance Sheet for the year 1887. It will be observed that under the head of Management only £407 5*s.* 7*d.* has been expended; this is much less than heretofore in consequence of the Secretary having drawn no salary. Under the new arrangement Mr. Armstrong becomes Assistant Secretary. The management expenses will amount to about £500.

The amount spent on Exploration shows that the work of the Committee is still actively carried on.

The Society has agents in the country who neglect no opportunity in pursuing those investigations, the results of which are given to subscribers in the *Quarterly Statement.*

The income of the Fund from the sale of their books now amounts to a considerable sum. The great excess of expenditure over receipts under the head of "Printers, &c.," is due to the cost of the *Quarterly Statement*, the publication of which is necessary for the very existence of the Society. It also includes the postage of the *Statement* for the year.

BALANCE SHEET FOR YEAR ENDING 31ST DECEMBER, 1887.

Receipts.	£	*s.*	*d.*
Balance, 31st December, 1886	322	11	0
Donations, Subscriptions and Lectures..	1,572	9	11
Maps and Memoirs ..	280	10	4
Books	369	10	3
Photographs	5	1	5
	£2.550	2	11

Expenditure.	£	*s.*	*d.*
Management	407	5	7
Exploration	647	14	0
Printers and Binders ..	942	4	0
Maps and Memoirs ..	337	3	7
Balance, December 31st, 1887	215	15	9
	£2,550	2	11

In other words, the total expenditure was £2,334 7*s.* 2*d.*, of which exploration took 27·7 per cent.: publication, 54·8 per cent.: and management 17·5 per cent.

As regards the present financial position of the Fund, we have already this year lowered the liabilities in the account of printers, binders, and lithographers by nearly £500—under this head we have a debt which is always being diminished and always increasing.

The debt of £850 has been reduced by £150.

The accumulated mass of memoirs which has been so long waiting for publication will, it is hoped, be all issued before the end of the year in an edition limited to 500 copies, uniform with the *Survey of Western Palestine.*

But new materials are always coming in, and subscribers who ask what the Society is now doing are reminded that it is not the accumulation of facts alone that is wanted but their publication.

WALTER MORRISON,
Hon. Treasurer.

NEW EXCAVATIONS IN JERUSALEM.

I.

Jerusalem, February, 1888.

In October, last year, I sent the Palestine Exploration Fund some drawings, with notes, of the old "Market"[1] to the south-east of the Church of the Holy Sepulchre. They were published in the *Quarterly Statement* for January, 1888, page 17, and I now send plans and sections of what was found to the *north* of the old "Market."

Plan No. 1.—At the bottom, on the left side, is part of the present *Sûk*, or Market. North of it is the street, *Khan ez-Zeit*, running to the Damascus Gate, or *Bâb el-Amûd*. Along this street there are shops; and at the north end of the plan are steps, and a raised road, passing over arches westwards to the Coptic and Abyssinian Convents. Near these steps are three granite columns, broken, but still *in situ;* a fourth was removed about twenty years ago, when a door was broken through the wall to make a wood-store. There are also some remains of a pier or stone jamb; and this, with the columns, formed in the Byzantine period the "Propylæum" of Constantine's Church; the columns probably extended farther north, but this cannot be ascertained on account of the buildings.

The wall which now closes the space between the columns was apparently built by the Crusaders. The open area between the columns and the east wall of Constantine's Church was vaulted as it is now. At the south end of the vault, which shows traces of restoration, there is an old wall, partly Jewish, but principally Byzantine.

At the bottom of this wall there is the ancient "threshold" (*see* Sect. 2); it is one stone, with a tread little more than one inch high, for the folding doors to shut against. The "threshold" of an ancient door is certainly Jewish, and in the Byzantine time it was used again as a door; but it opened (unexpectedly) outwards, proving that the open Propylæum could be shut up against the court of the Church. The lower part of the western wall of the Propylæum is of Jewish masonry, with drafted stones; higher up it is of Byzantine masonry, which can be well seen in the houses to the north; it formed the east wall of Constantine's Basilica. The southern wall of the Basilica was also built on old Jewish masonry, which forms a slightly obtuse angle with the east wall. This angle and the lowest course of stones in the wall are Jewish; the stones of the upper courses are smooth, smaller, and Byzantine. On the north side of this wall stone corbels were inserted at a later time (perhaps by the Crusaders), in order to vault the space. In the parallel wall to the north there are similar corbels. The Byzantine building, according to Eusebius, had no vaults or arches, but was roofed with timber, &c. South of the southern wall of the Basilica is a fine platform,[2] paved with very large

[1] The old market has been pulled down and no trace of it can now be seen.

[2] About seven feet above the surface of the street *Khân ez-Zeit* to the east. The rock is very near the surface of this upper platform.

flat smooth stones. On the north part was an open passage beside the Church ; on the southern part a cloister or covered passage. From this raised platform, broad steps lead down to a similarly paved platform, nine feet below, and to the old gate. (*See* No. 3.)

Some traces of rock-hewn steps can still be seen. In the Russian part of the vault, on the site of the Propylæum, a pavement was found, formed of large stones, from 1 foot to 1½ thick, more than 3 feet long, and 2 feet 6 inches to 2 feet 8 inches wide, nicely and exactly laid, with good joints ; the upper surfaces are very smooth, as if originally polished. This pavement extends southwards to the street *Ed-Dabbaghin*, or as far as the place was cleared of ruins, stones, and earth ; it probably extends further south, and perhaps also to the east. It has a fall towards the south, so that the water could run into the rock-hewn sewer, or, further south, to the masonry sewer. (*See* Nos. 1 and 2.) About the middle of the pavement is the so-called "Greek Arch," known for many years and figured in books about Jerusalem.[1] The north pier is apparently Byzantine, built of smooth and well-cut stones, which are much damaged by age. The south side is formed by a column with a block capital, unlike the one on the pier. This has puzzled everyone, and given the impression that it is a reconstruction and not the original arch ! Yet the column may be genuine with a wrong capital upon it. In this case the column must have stood in the centre, and the whole have formed a double arch. So the Russian Archimandrite understood it, and he intended restoring the arch according to his view. He built a new pier to the south, prepared a Corinthian capital, &c. ; but, on closer examination, I found there had been only one arch, and no column. It is quite clear that the northern pier was once broader (as shown in Nos. 1 and 2). No 2 gives, in elevation, the number and size of the stones where the joints do not run through.

I have shaded the older or Byzantine portion, and am convinced that the southern pier originally had the same form and size, and that the Corinthian capital, which carries one side of the arch, stood on the southern pier, like the one on the top of the northern pier. In the Byzantine portion there are five courses of stones from the pavement to the spring of the arch ; I cannot tell the thickness of the missing abacus, but the curve of the arch can still be seen (in No. 2). In place of the abacus there is now a stone, with mouldings on its face, which I think must have been the key-stone. The key-stone certainly had some ornament ; it was probably broken by the falling of the arch, and then chiselled to fit its present place. In accordance with these indications, I have restored the arch in No. 3. The arch probably had an attic, which I have not attempted to restore. The entrance to the passage is 12 feet 8 inches wide, at the centre it is 14 feet wide, and it is 13 feet deep. It was once arched over, and I think it was a monument of some event ; very likely

[1] *See* Sepp, "Jerusalem and the Holy Land," i, 226, where it is called an ancient town gate.

of the passing of our Lord to Calvary. It formed at the same time an entrance to Constantine's Church, for a road ran westwards from it, along the side of the southern cloisters of Constantine's Church, which stood at a higher level, to the present south court of the Church of the Holy Sepulchre. It might thus be considered part of the Propylæum mentioned by Eusebius. The column is of reddish limestone, and so is the cracked unfinished capital; but the basement is of white marble, which has apparently been used a second time. Another similar basement was found in the rubbish near the side of the column.

As the Russians found no cistern on their property, and water was required for any building erected upon it, they resolved to make a new cistern. North of the "Greek Arch" the rock was known to be everywhere near the surface, and as it would have been difficult to dig a cistern there, they determined to try the ground to the south. They removed the Byzantine pavement, and finding at first earth and stones, they were able to dig down 5 or 6 feet, they then came to hewn stones, lying in disorder as if they had fallen down on the destruction of a wall or building. They removed the stones until they had made a pit more than 20 feet deep, about 45 feet long, and 28 feet wide. As they had then obtained the requisite size for the cistern, and further excavation would have been dangerous on account of the loose stones on the three sides, and the proximity of the new Greek building, they did not dig deeper. They built the walls of the new cistern, and at the bottom ran in dissolved lime until all the empty spaces between the stones were filled up.

On the east side they found an ancient wall, running north and south, nearly under the present boundary wall of their property. Under the pavement the wall consisted of two courses of large smooth Byzantine stones resting on five courses of rather smaller stones, with dressed joints and rough faces. Each course is set back a few inches, as shown in Section 2A. This wall of seven courses stands on bad rubble masonry, built with small stones of all sizes and forms; what is lower down I do not know. When this wall was discovered it was rumoured that the ancient town wall had been found; this is only to a certain degree correct. It is now quite clear: first, that there was a trench here, and if this were the ditch of the town wall, the latter must have stood on rock, or above a rock-scarp, and not on rubble; secondly, the wall is not Jewish but Byzantine, with some Jewish stones built into it. Towards the south the stones are much smaller, and it seemed as if there had been a reconstruction. I cannot tell what will be found farther south, nor the real lie of the rock at the bottom of the trench, but I have embodied my views in the sections. Some of the over-turned stones in the ditch are really Jewish, with the draft on their faces, and these are the largest; the others are of different size, but all smaller and with smooth faces, I therefore call them Byzantine.

In the wall there was a door-like opening—the outlet of the sewer from the old market; I tried to clear it out, but after 5 or 6 feet found it walled up. Perhaps when the new pavement of the street is made by

the Municipality it will be opened. I think, farther east, it is rock-hewn, as a little east of this wall the rock rises above the ground. As the rock is near the surface beneath the "Greek Arch," and no rock was found 12 or 15 feet from it at a depth of 22 feet beneath the pavement, there must be a rock-scarp in the interval such as I have shown in Nos. 2 and 3. I asked the Russian Archimandrite to order the foreman of the workmen to clear away the stones for about 10 feet more towards the north, and told him he would certainly find a rock-scarp, and so have no need to build a wall there for the new cistern, whilst the cistern itself would be so much the larger. I also told him I was convinced he would find rock-cut tombs or other caves in the rock-scarp. I asked him, when the walls of the new cistern had reached a height at which there was no longer any danger, to sink a shaft in the centre of the cistern, so as to ascertain the real lie of the rock, and I offered to pay the expenses myself. The answer was that they could not do anything without an order from St. Petersburg.

The Archimandrite considers this proposed excavation interesting, and thinks my suggestions are right, but he has first to report upon it to St. Petersburg; the excavation may therefore still be made. The caves in Nos. 2 and 3 are shown as I think they will be found.

The internal measurement of the new cistern is about 40 feet by 13 feet; it is not arched but covered with iron rafters, as shown in No. 3.

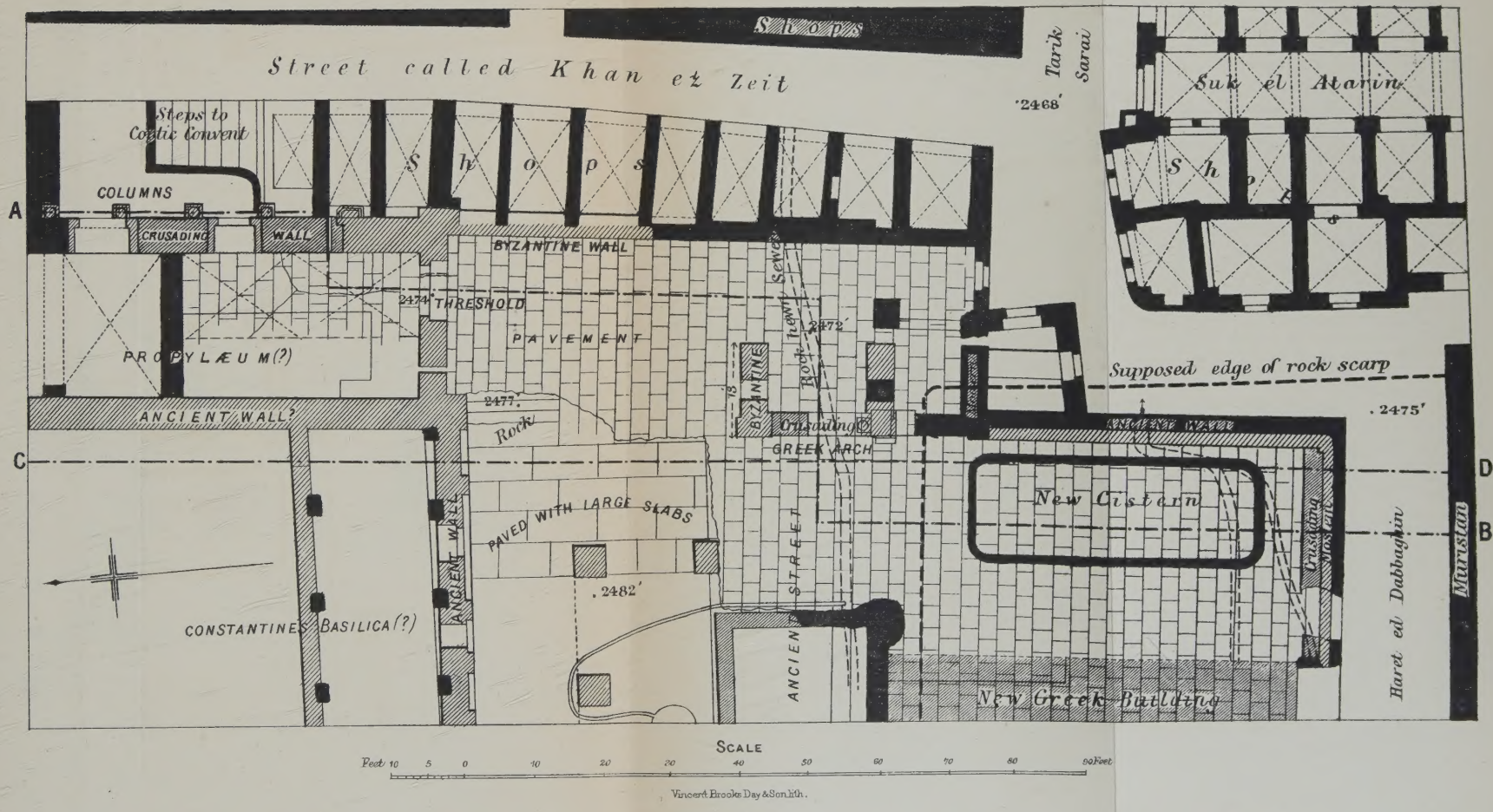
The southern boundary wall of the Russian property proved to be made up of three walls; in the centre there is a thin Byzantine wall of finely hewn stones, probably standing on the pavement; this is strengthened on the inside by a Crusading wall, which stands on earth and goes down but a few feet beneath the surface. On the outside it is supported by a Moslem wall, standing on the surface of the street, which was built when the wall was beginning to give way under the pressure of the vaults with their heavy load of earth. In the Muristan, 120 feet south of the Russian property, the level of the rock is known, and if this be connected with the rock level under the "Greek Arch," it will give the original slope of the hill as shown in No. 2. The new southern boundary wall will be in a straight line with the new Greek building, as shown in No. 1. As a corner of the old building projected into the street it had to be removed, and this has partly been done. They first tried to make the new cistern there, but came upon an ancient massive wall, which, I think, is the old or Jewish wall, probably standing on a rock-scarp, as not far east of it the rock rises above the ground.[1]

CONRAD SCHICK.

[1] The rock level here was originally 2,470 feet, but it has recently been lowered to 2,468 feet above the sea.

PLAN OF RUSSIAN PROPERTY
EAST OF CHURCH OF HOLY SEPULCHRE
SHOWING RECENT DISCOVERIES.

No I.



SCALE

Feet 10 5 0 10 20 30 40 50 60 70 80 90 Feet

Vincent Brooks Day & Son lith.

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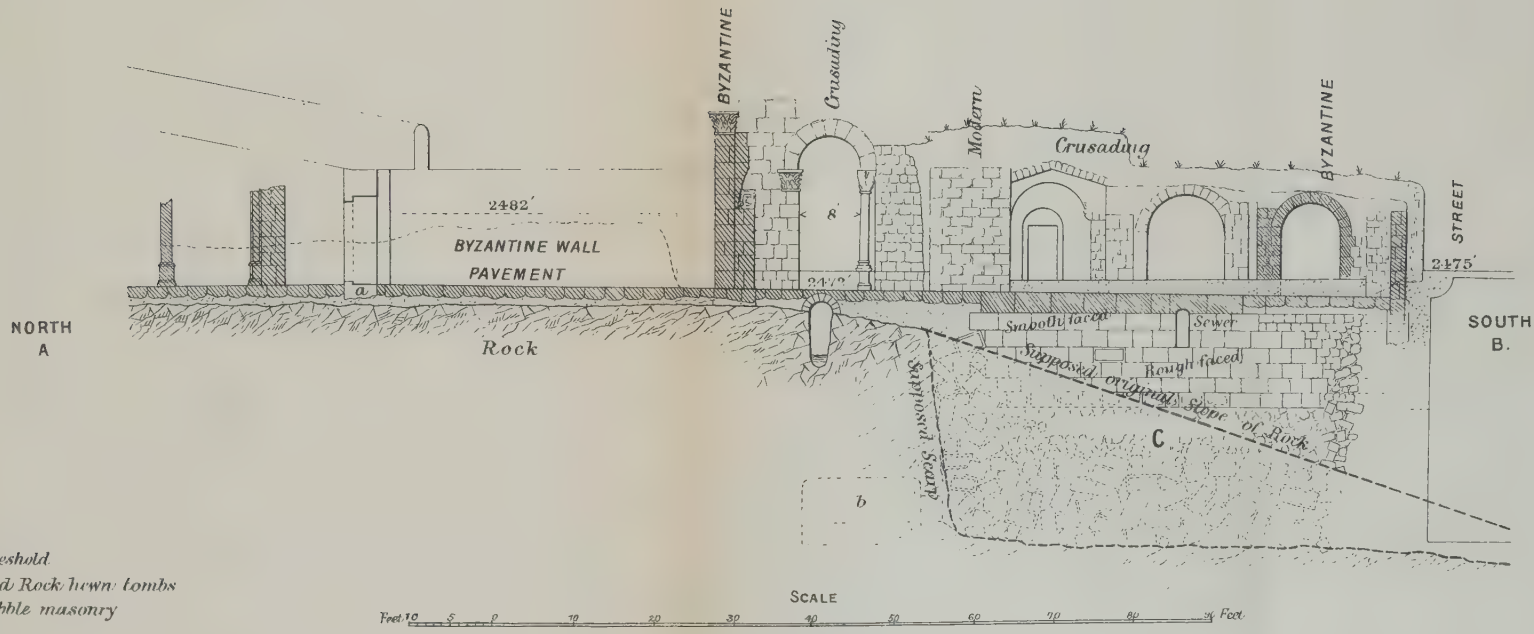
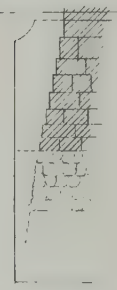
SECTION ON A.B. Nº2.



SECTION OF ANCIENT W



Nº2.

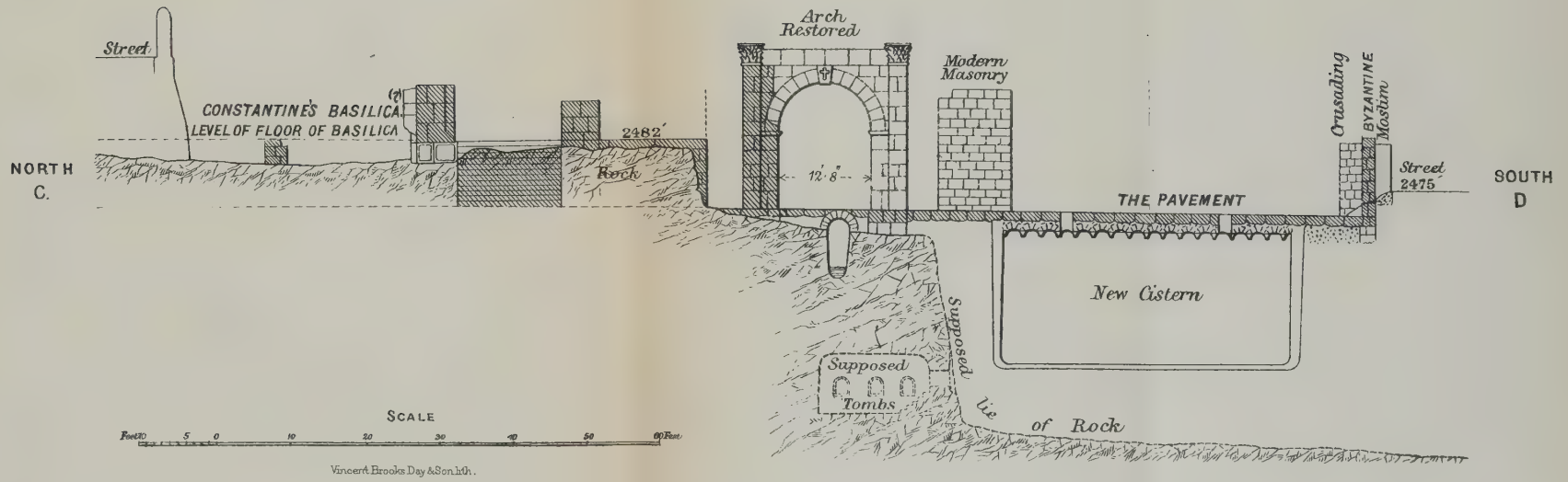
a. The threshold
b. Supposed Rock hewn tombs
c. Bad rubble masonry

SCALE

Feet 10 5 0 10 20 30 40 50 60 70 80 90 Feet

Vincent Brooks Day & Son lith.

SECTION ON C.D.



Vincent Brooks Day & Son lith.

II.

Mr. Schick's paper completes his description of the very interesting discoveries made in the Russian property to the east of the Church of the Holy Sepulchre. It is greatly to be regretted that such a favourable opportunity for thoroughly examining and clearing this most important locality should have been lost. The questions which Mr. Schick raises with regard to the existence of a rock-hewn ditch, the course of the second wall, and the exact position of Constantine's Basilica, are of the greatest interest to every student of Jerusalem topography; and it is to be hoped that the Russian Palestine Society may be induced to resume the abandoned excavations and clear the entire area. It is only by taking advantage of opportunities of this nature that we can ever hope to re-construct ancient Jerusalem.

Though the discoveries that have been made are of high interest, I am not able to agree with the deductions that Mr. Schick has drawn from them, and it may be as well to state some of the objections that occur to me. (1) Mr. Schick believes that the granite columns in the street *Khan ez-Zeit* formed part of the Propylæum of Constantine's Basilica. In 1865 ("Notes to the O.S. of Jerusalem," 53, 54) I drew attention to the fact that "these remains, some of similar character in the ground formerly belonging to the Knights of St. John, and the so-called 'Gate of Gennath,' are nearly in the same straight line." A glance at the plan of Jerusalem will show that from the Damascus Gate a street runs southward to a point in the city wall where the Sion Gate stood before the walls were rebuilt in the sixteenth century. This street, I believe, follows the line of the main street of Ælia, which, in all probability, was adorned with columns as in the similar cases of Samaria, Scythopolis, Damascus, Gadara, Gerasa, &c. If this supposition be correct, the columns belong to the street; and the "Greek Arch" and "Gate of Gennath" are the remains of ornamental portals leading to side streets. The columns are certainly not such as we should expect in the Propylæum. Whether the Damascus Gate received its name of *Báb el-Amúd* from these columns or from the great column which, when the Moslems first took the city, marked the centre of the world, is uncertain.

(2) That the ancient masonry uncovered is Jewish. In 1865 I made some tentative excavations, and came to the conclusion that, though old material had been freely used, none of the existing remains bore the character of mural masonry. The remains seemed to me to belong to an old church, and this view was partially confirmed by the discovery of a very fine font or basin of white marble. ("O.S. Notes," 53, 74.) The character of the masonry, however, led me to believe that the church was a re-construction after Constantine's churches had been destroyed, and that it might even be as late as the period of the Crusades. The position is not that in which we should expect to find Constantine's Basilica.

(3) That the "threshold" is Jewish. Without personal examination

I should be sorry to pass a decided opinion; but this stone appears to me to be an old lintel used during a period of re-construction, and not to be *in situ*, as Mr. Schick supposes. There seems no valid reason for believing it to be Jewish.

(4) That the new cistern made by the Russians is in the ditch of the second wall. The truth of this speculation can only be proved by excavation; it is not impossible, but the space cleared is so small that it is rash to base any theory upon it, and there may have been an old cistern on the spot. Mr. Schick's view of the further course of the ditch is open to greater objection. He places the chapel and cistern of Helena in the excavation. It is true that no rock can be seen in the chapel, on account of the plaster, but what we know of the lie of the rock near it would lead us to believe that a portion of the walls are of rock. As regards the cistern, I find in the "O.S. Notes" (p. 54), that is described as being "of irregular shape, hewn out of the *Malaki* bed, with the overlying bed of *Missae* left as a roof, one of the most ancient types of cisterns, and similar to those in front of the *Masjed al-Aksa*." If this description be correct, and I have no reason at present to doubt it, the ditch could not have run in that direction. There are other objections to Mr. Schick's theory, the discussion of which would occupy too much space.

(5) The pavements are not the least interesting of the discoveries. The lower pavement is on the same level as the floor of the Rotunda in the Church of the Holy Sepulchre; the upper one at a slightly lower level than the floor of the Chapel of the Exaltation of the Cross, which is almost due west of it. How far either or both are the work of Constantine is a question; the lower one may in part be the street pavement of the city of Ælia; the upper possibly connected with the platform of the Temple that preceded the Church of Constantine.

It is so important that researches should be carried on at this spot, that the Committee have taken steps which they hope will be successful to work in co-operation with the Russian Society.

C. W. W.

LINE OF SECOND WALL.

Jerusalem, February 14th, 1888.

I.

In the *Quarterly Statement*, 1888, page 16, Dr. Merrill pointed out that my Statements and Plan in *Quarterly Statement*, 1887, page 217, were wrong in two important points.

First, that the ancient remains of the so-called "second wall" are not in its right position and direction; and secondly, that I have not given it in full length!

To this I have only to say:—It is not my custom to go into any controversy at length, but only stating facts for my defence. In respect of

the second point I wish to say that the gentleman he calls the "Engineer" showed me the exact spot of the ancient stones towards north, at a point a little south, opposite of the corner of the street going eastwards (or the home of the Sisters of Zion), and that in the *Quarterly Statement*, 1886, page 23, Dr. Merrill himself gives its length to about 30 yards, that is 90 feet, and my drawing in *Quarterly Statement*, 1887, page 217, shows 108 feet; and in respect of its "prolongation towards north-west," the "Engineer," the mason, and other people who had seen it, told me that it was a wall of quite another description, and not grounded on the rock but standing on earth; further, in that region all foundations for the new building were made new—as I myself have repeatedly observed, and the "Engineer" told me.

In regard to the first point, the old wall shown in my plan as not giving its right position or direction I have to say: that the street had formerly been at an average of 10 feet wide, but now, after the new building is made, is now on an average of 15 feet wide. When the street was altered, see *Quarterly Statement*, 1886, page 23, for the description in the last 8 lines: "The large displaced stones, represented by the heavy broken line opposite Frutiger's Bank, which were found when grading the street, would be on the line of the old wall beneath them." These stones formed, as it was plainly perceivable, the inside of the ancient wall, and was partly under the narrow (old) street. As the ancient wall was of considerable breadth, its western face certainly fell "*inside*," *i.e.*, towards west of the old boundary wall of the "open field" —but as the new building was put backwards, and the street made 5 feet wider, it fell nearer the edge of the new wall. The "Engineer," the mason, and others told me plainly, in the south, the *whole new wall stands on the old*, in the middle not fully the half, and in the north *nothing at all*—"not one inch," as the "Engineer" said—and accordingly, as I have seen the remains, consider the plan to be correct.

Finally, when my plan in 1887, page 217, does not agree with the one the "Engineer" had given to Dr. Merrill, this I can believe, and understand that I was not able to get also such a one from him, although it was promised to me repeatedly, but I was obliged to make my own, which every one may compare with its object.

The "*cistern*" spoken of in *Quarterly Statement*, 1888, page 16, I would not call it a "*large one*." It ends towards west, in about the middle of the (former) street, not going fully to the boundary wall at that time (*i.e.*, to the ancient wall), and its greater part extends eastwards under the building of the Joseph Sisters.

This I thought to be my duty to explain to the Palestine Exploration Fund.

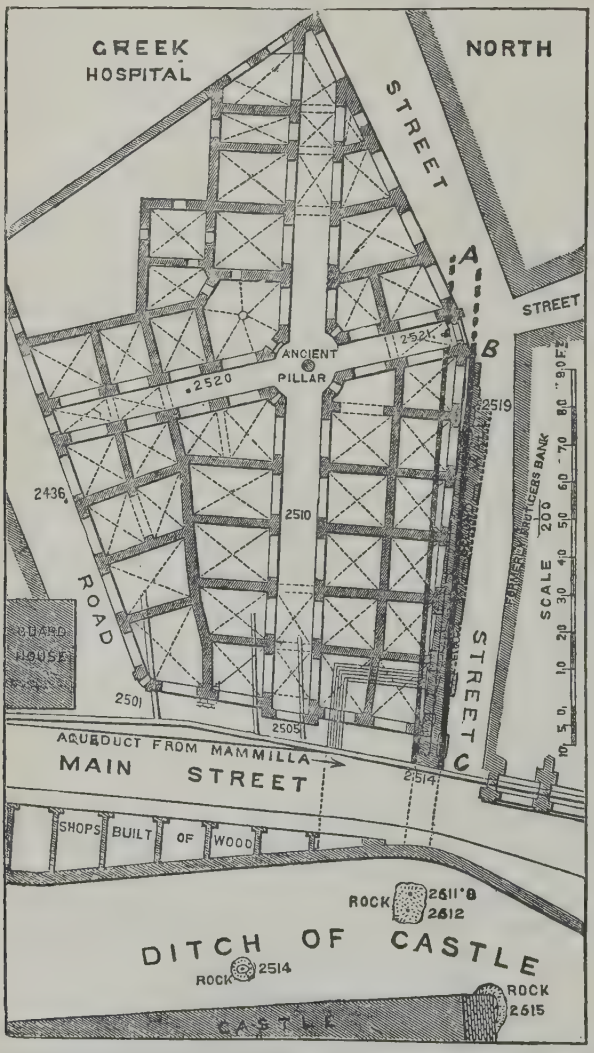
C. SCHICK.

II.

I have indicated on the inclosed plan, which you kindly sent me, the direction of the old wall according to my notes and observations. From C to B the line was nearly complete. From B to A it was broken.

Looking over my notes, and comparing them with the line which the engineer made (indicated in pencil lines on the inclosed plan) of the course

PLAN OF NEW BUILDING NEAR JAFFA GATE, SHOWING LINE OF SECOND WALL.



Thick black lines A, B, C, Dr. MERRILL. Thin lines with shading, HERR SCHICK.

The figures apply to the Rock levels, not the surface of the ground.

of the old wall, I am inclined to think that there may have been a slight angle at or near the point B, the wall beyond B, in the direction of A, turning to the left. If the question lies between Schick, Merrill, and the Engineer, I should say, were I appointed to decide upon it officially, that the Engineer's testimony should have the first consideration.

Selah Merrill.

Andover, Mass., U.S.A.

NOTES ON A JOURNEY FROM ISKANDERÛN TO TRIPOLI.

By Greville J. Chester, B.A.

(*Member of the Royal Archæological Institute.*)

On the 20th of November, 1886, I arrived by the Russian steamer at Iskanderûn, which, although an open roadstead, is, from its position, the only tolerably safe anchorage in Northern Syria. The small town of mean dwellings is beautifully situated under the steep but forest-clad range of Mount Amanus, which is an offshoot of the still higher mountains of the Cilician Taurus, whose towering heights are seen in the distance across the gulf. Iskanderûn is malarious and fever-stricken, on account of an undrained and pestilential marsh which festers immediately behind the houses of the town. Drainage would be easy, and would conduce enormously to the welfare of the place, which is almost uninhabitable in summer and early autumn; but the Turks are averse from improvements of any kind, so nothing is done.

In a wonderfully short space of time my excellent servant, Yusuf Basîl, of Beirût, had struck a bargain for two horses and a mule for the journey to Tripoli, and by 3 o'clock I was in the saddle. My muleteer, Mohammed, had never before been beyond Antioch.

Crossing the marshy plain, whose stagnant pools abound with fresh-water turtles, and their rushy banks with tree-frogs greener than the reeds to which they cling, I speedily reached the base of the mountain, up which a well-engineered road, constructed by a foreign company, winds on its way to Aleppo, and in three hours reached Beilân, a populous village of Christian Armenians, situated a little below the watershed. I found fair accommodation at a new Khân most picturesquely placed, its stone substructions being thrown across a rocky ravine, and supporting a wooden veranda, out of which the guest-chambers open. The view down the defile, with its precipitous rocky sides, to the tranquil gulf below, with the huge snow-capped mountains of Asia Minor, and in the neighbourhood of Tarsus, is beautiful in the extreme. Below the village the ravine is vocal with falling water, and is full of pomegranates and other fruit trees. The houses of Beilân are flat-roofed, with projecting wooden galleries, and are built in terraces one above the other. The village street

exhibits a condition of cleanliness and prosperity due to the superior civilisation of its Christian inhabitants, and is quite unlike that of a village of Muslim Turks.

Next morning I was off betimes, and in about an hour reached the top of the pass, some 1,600 feet above the sea. In places the road was well-nigh blocked by huge flocks of sheep, which, starting from vast distances inland, and changing conductors two and even three times, are led down to the coast at Iskanderûn for exportation. These animals travel slowly, being often several months upon the road, but they browse in passing where they will, and were all in fine condition. After passing the water-shed a splendid view inland bursts on the eye of the Bahr-el-Abyad, the White Sea, or Lake of Antioch, situated in a vast marshy plain, bounded by mountains of fine outline, and studded with lonely Tels, which mark the sites of unknown and long-buried towns. Shortly after passing the summit we left the high road to Halep, and turning to the right, passed across and along numerous wooded ravines which intersect and drain the southern slopes of Amanus. The autumn tints of the deciduous trees on the limestone formation were extremely fine, but the plain below was burnt up to a dusty brown, even to the very edge of the great lake. To the right are seen the imposing ruins of a crusading castle on a precipitous rock overhanging a ravine. This fortress, now called Kulat-el-Bagrâs, is said to be the Mansio Pangrios of the old itineraries, and the Pagræ of Strabo, and was one of the defences of "the Syrian Gates." Descending for about an hour from a point opposite this castle, we reached a small village of miserable huts, named Karamurt, situated on the verge of the plain, close to the ruins of a large and finely-constructed ancient Khân. While resting for a few minutes at a wretched wayside café, a boy brought me a handful of Roman-Colonial and Byzantine coins, but was prevented from selling them by a dirty and ragged Turkish soldier, who was collecting taxes, and probably intended to confiscate them to his own use. The track across the plain from this place sometimes follows the track of the old Roman road, paved portions of which exist in places, and sometimes diverges from it. The soil of the plain is of extraordinary richness, and vast quantities of liquorice spring up spontaneously. It is cultivated in part only by wandering hordes of Turkomâns, Bedoueen, and Kurds, and I passed two or three villages of immigrant Circassians. Asking the character of these people, I received the answer, "*They are very good people in the daytime!*"

On approaching the Orontes, a little above Antioch, whose ancient fortifications had long been in sight, I found it to be an eddying river of a milky-white colour. The stream is impeded by numerous dams and weirs, and huge wooden water-wheels continually turn with a creaking sound like that of a magnified Nubian sakieh, and raise water for the irrigation of the neighbouring orchards and gardens. One of these wheels at Antioch itself is close on a hundred feet in diameter!

The situation of Antâkia or Antioch is worthy of its ancient fame. The modern city occupies but a small corner portion of the ancient site at the

foot and on the lower slopes of Mount Silphius, and extends along the left bank of the Orontes, which is crossed by a single bridge. The ancient city ran high up the slopes of the mountain behind. The existing antiquities are strangely few. Earthquakes, and the still more destructive Turks, have combined to erase the noble features of the ancient capital of Syria, erewhile the second or third city of the Roman Empire. The streets and bazaars are mean and narrow, the centre being occupied by ditches, filled with black mud, dead cats, offal, and every kind of filth, beside which, like swine, the Turkish inhabitants take their pleasure. The bazaars, however, are well supplied with vegetables, and in places venerable plane trees overhang the streets. The lower portion of the city wall, near the river, which in part consists of large drafted stones, and the remains of a tower, seem to be of more ancient structure than the Roman and Byzantine fortifications above, and probably date from Seleucid times. It is harrowing to be obliged to speak of the walls of Antioch, once perhaps the most splendid and picturesque in the world, as monuments of the past. Originally they zigzagged up almost perpendicularly from the Orontes to the very top of Silphius, set thick with noble towers and bastions, some of which were no less than 60 feet in height. On the top the walls leap from rock to rock, crest huge precipices, and in one place stretch across a savage ravine, which they bridge over by means of vast substructions built up from the bottom to a height equal to that of the rest of their circuit. When perfect these walls enclosed a space of seven miles. Now, under Turkish auspices and Turkish rule, the whole of the walls on the slopes or face, as distinguished from the top of Silphius, with their towers and bastions, have altogether disappeared. Multitudes of the finest stones have been transported across the river, and appear as gravestones in the great Turkish cemetery ; others have gone to construct a modern barrack. In fact, every one who wants a stone for building or for a memorial of the dead, resorts to the walls, and, without let or hindrance from the authorities, carries off whatever he desires. So the work of destruction begun years ago is still going on, and ere long what might justly have been regarded as one of the wonders of the world will be matter of history only.

It is strange that Antioch is so seldom visited by European travellers, for the scenery is beautiful, and the city has the paramount interest pertaining to it, that it was there that "*the disciples were first called Christians*,"[1] and thence it was that the Apostles SS. Paul and Barnabas started on their first journey to evangelize the Gentiles.[2] Antioch was likewise the Bishopric held by S. Ignatius, afterwards martyred at Rome in the Colosseum under the Emperor Trajan.

It is very injurious to British interests and to the character of the English as a nation that, in a place like Antioch, the Consular Agency should be confided to a Jew, who is unable to speak a word of any European language.

[1] Acts xi, 26.

[2] Acts xiii, 1-4.

From Antioch I made a pleasant excursion to Beit-el-Ma, "the House of Water," the Daphne of the ancients. The path led at first along the left bank of the eddying Orontes, and then, turning to the left, I passed along lanes whose high banks of reddish soil, garnished with ferns and trailing creepers, had all the appearance of those of Devonshire. Emerging at length upon an upland plateau, I found the sequestered Beit-el-Ma at the head of a beautiful ravine at the foot of lofty limestone mountains. All remains of the ancient grandeur of Daphne have disappeared; not a vestige of temple or shrine now remains. But the place is one of singular loveliness and seems the very abode of peace. There is "water, water everywhere;" water bursting forth clear as crystal from and out of the rocks above; water racing in little rocky runnels under ancient plane trees and thickets of evergreens; water turning little corn-mills, so ridiculously small that they might seem to be the mills of pigmies; water dashing down in splashing falls, and joining its rills to form a rushing torrent, which foams away half-hidden in bowers of verdure at the bottom of a deep ravine. Around and about the mills I encountered a few Nusaireyeh men and boys in their picturesque garb, and of a personal beauty rarely seen elsewhere. These people do not live at the mills, but at a village about a couple of miles down stream.

The distance from Antâkia to Sueideyeh (Seleucia) can scarcely be more than 16 miles by the direct route—that, doubtless, which was taken by SS. Paul and Barnabas—but the course of the Orontes, which lies to the left of the track, winds to such an extent that its course is more than forty. The road is one of great beauty, passing through wild ravines along the base of the mountain called by the Macedonian Conquerors of the country Pieria, but now Jebel Musa, and crossing streamlets hurrying down to join the swift-rushing Orontes. When the highest point is reached and the corner of the mountain is turned, the sea bursts upon the view, with the mouth of the Orontes and the rich plain of Sueideyeh in the foreground. Off the mouth of the river, as I saw it, lay three large American ships of the United States, waiting for cargoes of liquorice, which is abundant upon this plain also, and which is largely used in the manufacture of tobacco. No town marks the sight of the once magnificent city of Pierian Seleucia, but a few houses and a Turkish custom-house stand a little above the mouth of the river, and the plain of Sueideyeh is dotted with a considerable number of cottages and houses of a better class, mostly embosomed in gardens of pomegranates and other fruit trees. In one of the best of these houses I was hospitably received by a beautiful and gracious lady, the wife of one Simon Panayôt, a Syrian gentleman of the Orthodox Greek Church, who is both a merchant and a cultivator of the soil. My host, who acts informally as agent under the British Flag, was absent on my arrival at the Goletta, but soon came home, and I had the advantage of his company when I rode to visit the remains of the ancient city about 3 miles distant, upon the steep scarp of Mount Pieria, and between it and the sea. These remains, which cover a tract some miles in circuit, are still of considerable

importance, and present a very picturesque appearance, being overhung and often overgrown with gnarled fig and other fruit trees. Overhead are steep and often precipitous rocks, some of which have evidently been artificially scarped. Everywhere they are perforated by innumerable tombs, some of vast size, and in addition to these I noticed many niches intended apparently for *ex votos*.

In some places are perched up huge stone sarcophagi, with wreaths, cupids, and other emblems sculptured upon their outer faces. Most of these have been rifled of their contents, but I saw at least two which are still intact. The remains of two of the city gates, of an amphitheatre, and of large and curious portions of the ancient fortifications can still be seen, and the ruins are everywhere strewn with broken columns, while in one place a headless statue of white marble still stands in its original position. In the low ground in front of the city are massive walls which now inclose a marsh, once the inner harbour of Seleucia. A canal, several hundred yards in length, now choked up, leads from this harbour to the sea ; it was originally protected by bastion towers, of which some vestiges exist. The entrance from the inner to the outer harbour is marked by two magnificent piers formed of vast stones clamped together with iron, of which the southernmost, 120 yards in length, is still in admirable preservation, and vies with any existing work of the kind. It was probably from one of these moles that the Apostle Paul stept on board the galley which was to convey him across to Cyprus.[1] The view from this spot is of extreme beauty and interest : the mountainous coast to the north, the sweep of mountains to the east and across the mouth of the Orontes, the stupendous limestone cone of Jebel Okra (Mount Casius), rising some 5,800 feet out of the blue waves of the Mediterranean—all these combine to form a picture never to be forgotten. Inland, to the north of the ancient harbour, is a wonderful series of galleries and tunnels cut in the solid limestone rock, and said to be 1,200 yards in length. They served the double purpose of supplying the city with water, and of carrying off the surplus water which accumulated at times in a rocky ravine, to the sea. The depth of these galleries reaches in places to 120 feet. This immense work would answer its purpose to the present day had not the Turks in sheer wantonness blown up the lower part of the excavation, and made a breach through which the water escapes and forms an unwholesome and malarious morass. Judicious digging on the site of Seleucia could not fail to be attended with the discovery of most interesting antiquities.

I rode back to Sueideyeh along the sandy beach which extends from the mouth of the harbour of Seleucia to the mouth of the Orontes, to a spit of sand, on which stands the chapel or wely of Mar Girgis, St. George. This small, whitewashed, domical building, although of Christian foundation, is much frequented by Nusaireyehs, who come from considerable distances inland to make their orisons, with a view to obtaining relief from various diseases. In like manner the Muslim

[1] Acts xiii, 4.

fellaheen of Central Egypt frequent the shrine of St. George, at Bibbeh, on the Nile.

I left Sueideyeh betimes in the morning, and was ferried across the Orontes near the Goletta, a little above its mouth, having engaged a young man to act as guide as far as Kesâb, on the further side of Jebel Okra. The path, if such it could be called, for it was often imperceptible led across a marsh at a little distance from the sea, near the supposed site of the ancient Nymphæum, and then under lofty and precipitous rocks of grey limestone, much perforated by caves, in one of which I was glad to take refuge with my little cavalcade during a tremendous shower of hail. From this point I gained the sea beach at an angle of the coast formed by the jutting forth of the immense mass of Jebel Okra, "the Naked Mountain," so called from the bareness of its towering cone. The maps of the Syria coast are most deceiving at this point, as they all of them give the impression that there is a tract between the mountain and the Mediterranean, whereas the very contrary of this is the fact.

Jebel Okra springs up out of the sea, and its steepness is so great that there is no track possible on that side, all passengers being compelled to make a long detour inland. The cone of this great mountain is to Northern Syria much what the cone of Hermon is to Southern Palestine, and from its more isolated position it is even more of a landmark than its more majestic rival. A path used by charcoal burners to convey their wares down to the sea side, leads up the side of the mountain at a point where, albeit it is covered with scrub, it looks from below all but perpendicular. It proved, moreover, so narrow, that my baggage was three times swept off the back of my sumpter-mule by rocks and stubby shrubs which impinged upon the track. This caused so much grumbling on the part of my surly muleteer, Mohammed, that I feared he would strike work altogether, and I thought it best to go on alone and leave him with my servant and guide to settle matters as best they might. I accordingly continued the ascent, holding on by my horse's mane as he clambered up the steep ascent like a cat. On gaining a level space some 1,500 feet above the sea, I waited for near an hour, enjoying the superb view until I was rejoined by my companions, whose voices I had long heard far beneath me. Below lay the pellucid blue sea, the mouth of the Orontes, the chapel of St. George on its spit of sand, the ruins of Seleucia, with Mount Pieria behind it, and beyond again the forest-clad mountains which line the coast towards Iskanderûm, the chain of Amanus closing the prospect. Truly a glorious view of a goodly land—a land which but for Turkish tyranny and misrule might be a very "garden of the Lord." I now made the discovery that my picturesque guide, who was armed with a rusty gun and a portentously long knife, knew absolutely nothing of the way, never having traversed it before. We accordingly strayed from the track until we reached an upland village of the Nusaireyeh, which, from the number of hewn stones and scarped rocks, I judged to be an ancient site. On regaining the path and passing the watershed of the shoulder of Jebel Okra, a

magnificent view presented itself, chiefly of forest-clad mountains, extending range behind range far as the eye could reach. Afar off, in a deep valley, could be descried the village of Urdeh, chiefly inhabited by Mohammedans. After resting an hour for lunch under a gnarled carob tree of great age and size, I commenced the descent on the Eastern slope of the mountain, and having passed a village on the left of the path exclusively tenanted by Muslims, I reached Kesâb an hour before sunset. Though I made several inquiries I failed to learn the site of the Temple of Ζευς Κασιος, where Julian the Apostate went from Antioch to offer sacrifice, but it seems unlikely that its remains have entirely disappeared.

The Christain Armenian village of Kesâb, which is also the name of a considerable surrounding district, is built amphitheatrically on the side of the Jebel facing inland; the flat-roofed dwellings with projecting galleries of wood rising one above another like those of Beilân, and commanding an exquisite view of mountains and of valleys winding amongst them. I found the place in some confusion, for the Turkish tax-gatherers had been all day in the village, and the irregular soldiers—hang-dog-looking ruffians enough — were making their accustomed extra requisitions of bread, fowls, and other provisions. The Armenian community of Kesâb has been settled there for about 300 years, and up to a few years ago had stuck to their ancient faith, and there was one flock under one shepherd, the whole brotherhood dwelling together in unity. This steadfastness, however, proved too much for the equanimity of the Romish and protestant missionaries, who are for ever seeking proselytes from those who hold more ancient forms of Christian belief, and thereby add another element of disunion to poor distracted Syria. Accordingly a "mission" of the so-called "Reformed Armenians," who acknowledge the supremacy of the Pope of Rome, was despatched to Kesâb, made converts and erected an opposition Church to the old one. Next the United States' protestant missionaries of Beirût appeared on the scene, preached the New England gospel, made more converts, and built a conventicle at the other end of the village. In addition to these, an Irish presbyterian missionary makes his *villegiatura* with his wife in this healthy village in the summer months, but I did not hear that he had succeeded in establishing a fresh sect of his own. The inhabitants of Kesâb are now torn up by the dissensions of rival religionists.

I started before sunrise next morning with an excellent Armenian, named Cippa, as my guide and guard, passing through very beautiful wooded scenery. The country hereabout on the borderland of two pashaliks is unsafe and has a bad name, and I was assured that the natives who have occasion to go from place to place seldom venture to travel alone. About two hours from Kesâb the geological formation changes from the mountain limestone to volcanic rocks, which often come to the surface in the shape of broken masses of weathered basalt resembling lava. The vegetation changes as if by magic. The deciduous trees of the limestone in their gorgeous autumnal livery of scarlet, flame, and canary colour, which never elsewhere had I seen equalled or even approached in

splendour, suddenly give place to the beautiful, but somewhat monotonous, Aleppo pines. After winding through several rocky and wooded defiles, and crossing several "hills of prey," the path ascends to the summit of a forest-clad mountain, from which a superb view is obtained, and which trends down and ends at the promontory of Ras Buseit, near the ancient Poseidion,[1] whose site is seen on the coast far below. Looking southwards from the summit of the pass, the giant form of Lebanon is visible towering up in the extreme distance ; while in the other direction the far-off mountains of Asia Minor can still be descried across the sea. A tolerably steep descent leads down into the Wady Kandeel, which I followed for many miles. This valley is cultivated by the inhabitants of several Nusaireyeh and Turkish villages, which appear perched up on the top of the whitish clay hills which bound it. The scenery hereabouts is comparatively tame and uninteresting, and seems especially so after the extreme beauty of Casius and its offshoots.

Rain was threatening, night falling, and my horses were knocked up when I was still far from Latikeyeh, my destination for the night, so I was obliged to ask shelter in the cottage of one of the Nusaireyeh in a tiny hamlet at a place to the left of the road, named Hirbeh. These strange people, as is well known, have an equal prejudice against Christians and Mohammedans, and I found Mohammed, my muleteer, who arrived first at the cottage while I was watering my horse at a spring, was already in the midst of a quarrel with the good man of the house ; who, on my coming up, peremptorily refused me hospitality. An old woman, however, came out and spoke up for me, and permission was at last given me to enter. From that moment nothing could exceed the kindness and courtesy of Ibrahim, my host, but it was touching to observe his astonishment when I paid for what milk, and fowls, and fodder I required. After my dinner I brewed a quantity of tea, which I dispensed in three tin mugs to five women seated on a kind of clay dais on my left, and to twenty-four men and boys who sat in a triple semicircle in front of me on the mud floor. The same extraordinary personal beauty which I had observed at Beit-el-Ma, was characteristic also of the community of Hirbeh. They complained bitterly of the tyranny of their Turkish masters, of the exorbitant and illegal taxes they were called upon to pay, and of the requisitions of cattle, sheep, and other produce made by the officials. What weighed upon them most, however, was the ruthless conscription from which, until lately, in consideration of the unorthodoxy of their religious tenets, they had, on payment of a tax, been exempt, under which boys and men from 15 or 16 to 50 were carried off and doomed to serve in the army of the sultan. The harmony of the evening was only once disturbed, and that was when it chanced to be mentioned that a small kitten had recently been brought from Latikeyeh ; whereupon my muleteer exclaimed, "Ah ! it was born a good Muslim kitten, and now it will be brought up a bad Nusaireyeh !" It needed a lavish distribution of loaf sugar to quell the hubbub which ensued.

[1] Herod. iii, 91.

It was with some difficulty that, being dead-tired, I succeeded in getting the single room of the cottage partially cleared, and was able to prepare to go to bed. I slept that night in the single room of the house in company with five men, one woman, one vocal infant of uncertain sex, twenty-six sheep, fifteen goats, cocks and hens galore, a donkey, and the afore-mentioned kitten, which slept peaceably enough at my feet. In addition to these a strange cat came in in the night and consumed the greater part of a chicken destined for my next morning's breakfast. There were no insects !

The road from Hirbeh to Latikeyeh lies along a plain, sometimes cultivated and sometimes overgrown with thickets of lentisk, and a white and purple-berried myrtle, at no great distance from the sea. A flat track near the sea, where the grey rock crops out on the surface, is perforated by numerous tombs.

Latikeyeh, originally a Phœnician town, but restored by Seleucus Nicator, and named after his mother Laodice, was within a few years a tolerably flourishing city. Now its trade has been almost stamped out by the exactions and tyranny of the Government, and it is rapidly falling into decay. I was the witness of a highly characteristic incident. Going into the bazaars I found almost every shop closed, and scarcely a human being could be seen in the streets. I knew it was not the Sunday of the Christians, nor the Saturday of the Jews, nor the Friday of the Mohammedans. At length I found an old crippled jeweller squatting in his stall, and learned the reason of the depopulation of the city. A road (which no one expected would ever be finished) had been projected to go from Latikeyeh to Hamath, and the Turkish Governor had ordered the entire male population, irrespective of age, health, strength, or capacity to work, to turn out upon it. Even those who offered to provide four able-bodied men to labour in their stead were not exempted. Of course, no one was paid for his services, with the natural result that next to nothing was done.

The ancient monuments of Latikeyeh consist only of a few columns of a temple, and of a curious arch of late Roman date, which exhibits some unusual sculptures of shields and arms. Bits of old masonry of huge stones are seen on the edge of the now deserted harbour, and near it are some fine stone warehouses, apparently belonging to the epoch of the Crusades. The venerable Priest of one of the Greek Churches brought for my inspection a superb MS. copy of the New Testament in Greek, for which a very high antiquity was claimed. There is no doubt that the Emperor of Russia offered for it the sum of 2,000*l.*, but the Greek community unanimously refused to part with the precious volume. I do not profess to be a judge, but it did not seem to me that the book was of earlier date than the tenth century.[1]

[1] It is possible that this splendid MS. is of the Gospels only, but I unfortunately lost the book containing the whole of the memoranda taken during my entire journey. I must plead this excuse for the baldness and poverty of the present paper.

Leaving Latikeyeh, whose name is probably most familiar to those who know what is *good* tobacco, I forded one of the numerous Nahr-el-Kebîrs, and several other streams, and in five hours reached Jebeleh, the Gabala of the ancients, which gives its name to another splendid variety of the so-called "fragrant weed." This small town, or rather village, which with one single exception is entirely inhabited by Mohammedans, abounds in the remains of past ages, but is itself but a dirty and sorry place. At the northern entrance, near the fine old mosk of Sultan Ibrahim, who is buried within, and the crowded burying-ground, stand the grand ruins of a Roman theatre, whose vaulted passages must have rivalled those of the amphitheatre of Verona. Some of the huge stones of the old harbour may date even from Phœnician times, and the rock tombs are of very high antiquity. Broken columns and hewn stones lie about in every direction. Issuing forth from the walls of Jebeleh I saw the grand phenomenon of two perfect waterspouts, and several other imperfect ones hanging over the stormy sea. In about an hour I arrived at a small bay, near which, on its northern promontory, are the remains of ancient buildings with hewn stones lying about in great numbers. This place is called Tel Sukat. After fording several more streams, I came to another and much larger group of ruins, amongst which burrowed a few fever-stricken Christian inhabitants. It is called Baldeh, the Paltos of Strabo, and is situated on the top of low cliffs close to the sea, into which, hard by, flows a beautifully clear and rapid river named the Nahr-es-Sin, which is crossed by an ancient Arab bridge. At its mouth are the remains of an ancient harbour. To my surprise, my host at Banias, a Syrian of the Orthodox Church, informed me that this river derived its name from the French Crusaders, who call it the *Seine* in memory of their much-loved river in far-off France. In support of this apparently unlikely derivation, he cited the *fact* of certain villages near Latikeyeh being undoubtedly called after Saints of the Latin Church. On the other hand, the name of this river is supposed by some to be connected with that of the Sinites enumerated along with the Arkites and Arvadites in the Book of Genesis.[1]

The path onwards from Baldeh leads along the sea shore, and across the bay is seen towering up above the few buildings of modern Banias the stupendous castle of Markab, El Markab, "the Watch Tower," seated on a crag of basalt rising some twelve hundred feet above the sea.

Banias, the ancient Balanæa, although formerly a place of great importance and an episcopal see, has so much dwindled down that within a few years past it was entirely without inhabitants. It now consists of a few houses, which line the beach of a tiny bay, in the midst of which rises the new konak of the Turkish Caimacan of the district, who has removed his seat of government from the inconvenient site of Markab, and the quarters of his irregular soldiers. Behind the town there is a romantic rocky ravine with precipitous sides, through which a stream

[1] Genesis x, 17, 18.

finds its way to the sea. There is also a beautiful spring of fresh water, and the numerous walls, foundations, and rock tombs show the ancient importance of the place. I copied an ancient Greek inscription on a stone lying in front of the konak, but the transcript was lost in my note-book.

Next morning I started to visit Markab, sending my muleteer on with the baggage by the direct route along the coast. The ascent is very steep, and the climb a stiff one for man or horse. On the northern shoulder of the hill is a tolerably populous Turkish village in a beautiful situation. I had hoped and expected to find that the Castle of Markab was built on Phœnician, or, at all events, on Roman or Byzantine, foundations, but careful examination convinced me that the whole building is Gothic, of the period of the Crusades. Apart from its superb situation, the Castle of Markab must be almost without a rival. Carnarvon Castle, perched on the top of Penmaenmawr would scarcely equal it in grandeur. The Castle walls rise up from the black basaltic rocks, which in places are scarped to increase their apparent height. On the land side is a deep dry moat and numerous outworks. Vast subterraneous chambers with vaulted roofs were apparently used as stables. Within the walls is a fine first-pointed Gothic chapel, desecrated indeed and neglected, but still in good preservation, and used as a mosk by the few Mahommedans who continue to infest the ruins. The view from the battlements, of sea, winding shores, and distant mountains, is of indescribable beauty. Descending to the coast, I joined it at the mouth of a pretty ravine, on whose edge, overlooking the waves, stands a grand outlying Burj or tower, evidently, like the Castle above, of the Crusading epoch.

The route northwards from this point lies sometimes on, and at other times close to, the sea coast, which is commonly bordered by low rocks often perforated by tombs. Along the whole of this ancient and lonely coast, which once "echoed with the world's debate," the traveller has constantly to dive down into picturesque wadies and to ford streams half-blocked with oleanders and marged with venerable oriental planes. Scarce one of these valleys fails to show one or more arches of a grand old Roman bridge, and in some instances of one of Arab construction, but nothing appears of more modern times. It is the *rôle* of the Turk to blast, to destroy, to lay waste, not to originate or to restore. Of course, after rains, these rivers, which have their sources in the neighbouring hills, soon become impassable, and passengers prevented from crossing would be left in a country without means of obtaining either food or shelter.

After a long and tiring day I arrived at Tartûs (Antaradus), which, with Ruad (Arvad, Aradus), I have already described in the *Quarterly Statement*,[1] and after some difficulty managed to hire a small room on the top of a house belonging to a kind and courteous young Christian of the Greek Church.

[1] *Quarterly Statement*, October, 1875, p. 218.

I was at first disposed to think that the ancient cemeteries of Tartûs, the Isle of Ruad, and Umrît (Marathus) lay along the sea coast almost continuously from the southern gate of Tartûs to the southern end of the ruins of Umrît, there being, in addition, numerous chambered tombs cut in the rocks above the last-named place. Since, however, it appears that the Aradians were for long time at variance with their neighbours of Marathus on the main land, it is perhaps more likely that, at all events in later times, they would have been compelled to bury their dead, not immediately opposite their island fastness between Antaradus and Marathus, but at a considerably greater distance towards the north, viz., near their land port, Karne, or Karnos, which lies nearly a mile northwards of Tartûs, and still bears the name of Karnun,[1] and where rock tombs actually exist. Anyhow, the limited size of the Isle of Aradus would have rendered burials impossible within its circumscribed area. Excavations would probably determine this interesting point. It is worthy of note that, so far as I could ascertain, the massive bronze rings, apparently leglets, to some of which, in most inconvenient fashion, a second ring of bronze is attached, come from graves situated immediately opposite the island. These objects seem to belong to a very early period. The wealth of antiquities found in and about this neighbourhood is indeed surprising, and I know of no place in Syria where systematic excavations would be attended with more brilliant results.

Between Tartûs and Tripoli I witnessed a beautiful sight. The autumn rains had fallen, and the sand-hills near the sea, near the Eleutheru, or Nahr-el-Kebîr, at the "Entering in of Hamath," were covered with the black tents of the Bedawîn, who had come down from the interior to sow their grain, and who were seen far and near turning up the rich dark soil of the plain with their primitive ploughs, to which sorry little black oxen were attached. The day was sultry and thundery, and I encountered and followed for some distance along the flat ground an immense black snake, which could not have been less than ten feet in length. A little further on I saw a Bedawîn woman and her dusky imps stoning to death a small specimen of the same species. I should not have supposed from its appearance that this kind of serpent was poisonous, but my muleteer declared that it was so, and asserted that in the hot weather of summer it "stood on its tail," and with loud hisses struck at passengers who were unlucky enough to meet it. Near the Nahr-el-Bârid I struck into the new road which has been constructed by a foreign company, and leads from Tripoli to Homs.

From Tripoli I returned to Beirût by sea.

[1] *Cf.* Strabo, 753.

THE HITTITE LANGUAGE.

(1.) *Method of Study.*

Since the publication of Altaic Hieroglyphs, I have devoted time to the verification of the sounds proposed for Hittite words, by the aid of living languages, which serve to check the results of cuneiform study respecting the ancient Turanian languages of Western Asia. As the results have formed a lengthy MS., I propose to give an abstract of the more striking confirmations of the original thesis, which was to the effect that the Hittite language must have belonged to the same group to which the Akkadian, Susian, and Medic—the old Turanian tongues of Chaldea and Media—belong.

It appears to be now admitted that the Hittites were a Tartar people, and their language should therefore belong to the Turko-Tartar group. The Medic is pretty generally admitted to have been nearest to this group, but the Akkadian has generally been thought to be nearer to the Finnic languages. Lenormant, however, found that Akkadian grammar (especially that of the verb) was nearest to the Manchu-Tartar, which represents a very archaic condition of speech ; and he also considered that the Ugrian languages were nearer than the Finnic to Akkadian. The geographical position of Chaldea would render this natural, and the fact that the Akkadian numerals are nearer to the Turkish and to the Tartar is another important consideration. After having compared nearly 400 Akkadian words with Tartar and Finnic roots, it seems to me clear that the Tartar are usually nearest to the Akkadian. I find also that out of about 220 known Medic words 60 or 70 are radically connected with Akkadian words, so that if Medic be regarded as a Turko-Tartar language, the older Akkadian belonging to a period when the various branches of Turanian speech were perhaps less distinguishable, should also probably be classed as Turko-Tartar. In modern Turkish I find nearly 200 words which may be compared very closely with Akkadian. Some of these are dissyllables like *beuluk* (Akkad. *Bulug*), "division ;" or *Aka* and *Agha* (Akkad. *Aga*), "prince." But *Guiœuk* (Akkadian *Guk*), "blue ;" *Pala* (Akkad. *Pal*), "sword ;" *Ak* (Akkadian *Ak*), "white ;" and the rest represent the more numerous class of ancient monosyllabic words common to Chinese, Mongol, and Tartar languages.

Taking for comparison the dead languages, Akkadian, Medic, Susian, and the dialect of Malamir, I have only accepted for use as a rule words common to two or more of these dialects. Among living languages I have placed first the Turko-Tartar dialects, second the Ugrian, and third the Finnic. I have also given attention to the Etruscan language, of which about 250 words are known, and which is comparable on the one side with Basque and with Ugro-Finnic speech, and on the other with Akkadian. Mongol and Chinese words are also in some cases valuable for comparison. As regards grammatical construction I have studied

the Akkadian, Medic, Susian, and Etruscan, and among living languages the Turkish, Hungarian, and Basque. It appears to me, therefore, that any objection that might be raised to the exclusive use of Akkadian for purposes of comparison will not apply to the present enquiry.

As regards the sources of information respecting the Hittite language, they consist in (1) the names of 30 Hittite Kings ; (2) the names of 200 Hittite towns ; (3) the sounds recoverable through the Cypriote and other syllabaries as belonging to symbols on the monuments of Syria and Asia Minor. The fact that the Hittite language is comparable to the dialects of Asia Minor, Cappadocia, and the Vannic region, has long been regarded as probable. In many striking instances the royal names of tribes in these regions are comparable with both Akkadian, Medic, and Turko-Tartar words of suitable meaning, and while I believe that the name Hittite should be confined to one tribe dwelling in Northern Syria, it seems to me clear that the Canaanites (especially in the north) belonged to the same stock with the Medes and Akkadians, and with the Asia Minor tribes who afterwards spread to Greece and to Italy.

(2.) *Royal Names.*

As regards the royal names, there are several words which recur in these names and which are very distinctive of Turko-Tartar speech. Of these the most important, perhaps, is that occurring in the forms Tarka, Tarku, Tarkon, and Tarkhu. Thus we have—

Tarka tasas,	King of	the Hittites.
Tarka nanas,	,,	,,
Tarku timme,	,,	Erme.
Tarkon dimotos,	,,	Cilicia.
Tarkhu lara,	,,	Gamgami.
Tarkhu nazi,	,,	Milid.

This word is known in the Etruscan names Tarkon, Tarchu, Tarchnas, Tarcnal, Tarchi, Tarcna (Dennis, "Etruria," ii, pp. 41, 44, 102), and is familiar to us as Tarquin. It is a regular Tartar word for "chief," as in the Uigur *Tarkhan* and Tschuwash *Targan* or *Torgan* (Vambery, Root 182, p. 170), and is used as *Tarkhan* in Siberian (Taylor, "Etruscan Res.," p. 79). Vambery would render it "chief of the tribe," from *Tar* or *Tur*, "tribe," and *Kha* or *Khan*, "chief."

The word Tar or Tur, however, itself means chief. It seems to occur in the names—

Tartisebu,	King of	the	Hittites.
Tatar,	,,	,,	,,
Totar	,,	,,	,,
Motur	,,	,,	,,

It is indeed a very widely spread Turanian term, recognisable, according

to Vambery, in the names Tartar and Turk and the Uigur *Töre*, "prince" (Vambery, Root 197, p. 184), with the radical meaning of "foremost." In Akkadian *Dur* means "chief," and in Medic it is *Tar*. To the same root the word *Tara* or *Dara*, for "God," is probably to be ascribed, as in the Esthonian *Tara* and the Ostiac and Wogul *torüm*, "heaven." The names of Tar and Tarku, deities of Asia Minor, the Akkadian Istar (Ashtoreth), the name Dara for the God Ea, and Dar for the God Asshur, may be compared with the Finnic *Tara* (*see* Donner, i, p. 127), for "God," and with the Etruscan Turan for the dawn goddess ("Etr. Res.," p. 134). There was a Hittite goddess called Antarta, or Astarta. In modern Turkish دار (*dara*) means "a prince."[1] In Tschuwash *Tora* is "God."

Connected with this word is the word Sar, which occurs in the names—

Sap sar, King of the Hittites,
Maurasar, „ „ „
Kauisira, „ „ „
Khetasar, „ „ „
Sarduris, „ „ Van,

and many others. This word, though used in Semitic languages to mean "chief," can hardly be regarded as Semitic in the Hittite names, being affixed and not prefixed. In Egypt the word *Sar*, for chief, is traced back to the times of the ancient empire before the Semitic invasion ("Pierret, Vocab.," p. 515). It is used in Akkadian for "chief," and is represented by the modern title of Tzar or Czar, in Russia. It may be compared with the Samoyedic *Jeru*, "lord" (j and r being interchangeable in these languages), and with the Etruscan *Lar* (l and r being interchangeable). The form *lar* seems to occur in the name of the Gamgam chief, Tarkhulara. In Turko-Tartar dialects *Sar* or *Ser* means "strong" (Vambery, p. 145). In Finnic speech *Ser* and *Sur* mean "high" and "great." Like the preceding words Sar appears, therefore, to be a widely-spread Tartar or Altaic word for a person of dignity and power.

The word Lel or Lul also seems to be recognisable in the names—

Sap lel, King of the Hittites.
Sapa lului, „ „ Patinai.
Lalli, „ Milid.

This may be compared with the Akkadian *Lul* or *Lil*, "king," *Lala*, "ruler." The Hunns called their chiefs *Luli* ("Etr. Res.," p. 323), and since the word Sap means apparently a soldier (from the Tartar root *Sap*, "to strike" or "cleave"—Vambery, No. 153, p. 142—also found in Finnic, Donner, ii, p. 100 — and in the Akkadian *Zab*, "soldier," *Sapar*,

[1] There is another widely-spread word, *Tur*, for "son," and another *Tur*, for "camp."

"sword," and the Medic *Sabarrak*, "war"), it would appear that Saplel means "warrior king."

Another word which seems closely to connect the Hittite and the Akkadian is the name Ispu or Esebu. It occurs in the cases of—

Tartisebu, King of the Hittites.
Akitisebu, „ „ „
Ispuinis, „ Van.

In Akkadian *Issep* or *Essebu* signifies "prince;" *Sib* also means "king" and "shepherd;" and *Sibir* means "harvest." These words seem to be explained by the Tartar root *Sab*, *Sjib*, *jip*, *jüp* (Vambery, No. 37, p. 35), meaning "to gather" or "bind," while in Finnic *Sap* means "to squeeze" (Donner, ii, p. 62). Thus the shepherd (*Sib*) is the gatherer, the king is he who gathers people like sheep, the harvest is the gathering of corn.

Other tolerably clear Tartar words recognisable in Hittite royal names are (1) Aka, "prince"—Akkadian *Aga*, Turkish *Aka* or *Agha*, Uigur *ige*, Cagataish *ege*, Jakut *icci*. (2) Ir, "man"—Akkadian *Eri*, Manchu *Eri*, Turkish ار, *er*, Tschuwash *ar*. In Magyar *ur* means "lord;" in Medic *Ersa* is "great." (3) Kal, "strong," "big"—Akkadian *gal*, Susian *Khal*, Turko-Tartar *Khal*, *Khil*, *Khol* (Vambery, No. 72, p. 67). (4) Lab, "brave"—Akkadian *Lab*, *Lib*, Susian *Libak*, Turko-Tartar *Lap* or *Lab*, "strong" (Vambery, No. 131, p. 120), Turkish الب, *alb*, "brave." (5) Nazi, "prince," as in Susian and Akkadian. (6) Bakh, "king"—Akkadian *Pakh*, Turko-Tartar *Baj*, *Big*, *Bik*, "prince" (Vambery, No. 205, p. 194,) Turkish بك, *bek*, "chief" بك *pek* "strong." (7) Pas, "chief"—Turko-Tartar *bas*, *bash*, *pash*, "chief" (Vambery, p. 195), Turkish پاشا *pasha*. (8) Sun, "majestic"—Turkish صان, *san*, "dignity," Medic *sanu*, "powerful," *Sunku*, "ruler," Susian *Sunkik*, Malamir *Sunkip*, all from the same root. These, with a few others, enable us to translate nearly all the Hittite royal names in an appropriate manner.

It is to be noticed that these proper names often end in s, which was thus probably a personal suffix, as for instance, Pais, Kalbatus, Samaritas, Kamais, Tarkatasas, Tarkananas, Zuazas. The Cassite proper names, and a good many Akkadian proper names, have the same ending in s, as have many names from Asia Minor. The same termination occurs in Etruscan (*e.g.*, Truials, "a Trojan," Huins, "a Hunn," &c.). In Akkadian we have the word *Sa*, "man," which is perhaps the root whence the third person singular in s, common to many Ugric and Turkic languages, is derived. In Hungarian (Singer, "Hung. Lang.," p. 84) *es* is a suffix for the agent. The termination in s thus agrees with the fourteen words above mentioned in indicating very clearly the Turanian and Tartar derivation of the Hittite proper names for chiefs.

(3.) *Town Names.*

The geographical lists of the Temple of Karnak furnish a yet larger number of non-Semitic names in the Hittite country for analysis. There are difficulties in treating this list since some of the names are pretty certainly Semitic, while in some cases the transliteration is doubtful and in others the name is defaced. A comparative study, however, enables us to recognise certain Tartar roots in this nomenclature, and it has long been the opinion of competent scholars that the language represented by the town names of Northern Syria was neither Semitic nor Aryan, but presented (as do the personal names) the preposition of the defining word which distinguishes Turanian tongues.

1. Perhaps the best instance occurs in the case of the root *ab* or *eb*, as in the names—

Terab.	Rutub.	Tatup.
Nautab.	Papab.	Letep.
Nirab.	Kharab.	Ganiab.

In these cases the word seems clearly a suffix, or the defined word to which a defining word is prefixed. It may be compared with the Akkadian *ab*, "abode," and *ub*, *ib*, "region;" the Medic *up*, "city" (Lenormant); and the Chinese *ip*, "region." In Turko-Tartar dialects *eb* and *ev* signify "a house," from a root meaning "hollow" (Vambery, No. 47, p. 43), and this is connected with the Turkish اُو, *ev*, "house."

2. A cognate word Ai occurs in the names—

Aai.	Aiberi.	Aaitua.
Unai.	Khataai.	

This might be the Akkadian *Ai*, "mound," *E*, "house;" Medic *E*, "house" (Oppert, "Les Medes," p. 243); Malamir *E*, "temple" (Sayce, "Malamir," p. 103). In Turko-Tartar languages *oj*, *öj*, *ov*, *ev* mean "house." In Finnic languages *au*, *av*, *ou*, *oi* means "to excavate," having the same radical meaning as the Akkadian *E*, originally meaning a "hollow place," "cave," or "lair" (*see* Donner, ii, p. 91). From this root the name of Ai (Josh. vii, 2–5, Jer. xlix, 3) appears to be derived.

3. Another apparent root is Ara or Ari, as in—

Aari.	Aresa.
Aares.	Arinir.

This may be the Akkadian *Ari*, "flow," *Aria*, "river." In Turko-Tartar we find *Ir*, *ür*, *er*, "to flow" or "melt" (Vambery, No. 45, p. 42), whence the Yakut *ürak*, "stream." In Hungarian *ar* means "stream" (Donner, i, p. 104), and in Basque *ur*, *ura*, is "water." In Turkish ايرمك, *irmak* is "river."

4. Though only twice found, the root Atr is very distinctive, as in—

Atriten.	Aternu.

In Etruscan the word *Atrium* is derived from this root, which is the Turko-Tartar *Tur*, "abide" (Vambery, p. 185); Esthonian *tare*, "hall;" Magyar *ter* (Donner, i, p. 135). In Akkadian *Tir* is rendered "seat."

5. The root Un, or Aun, appears in the names—

Unai.	Aunuka.
Unpili.	

With these we may compare the Akkadian *un*, *unu*, *unug*, "city;" the Turkic *in*, Tcherkes *unneh*, Wogul *ion*, Etruscan *on*, "city" ("Etr. Res.," p. 348). In Finnish *huone*, in Esthonian *hõne*, in Lapp *huona*, in Hungarian *hon*, signify "house" or "home" (Donner, i, p. 95). This seems to be the Medic *ummanni*, Susian *umman*, "house" (Oppert, "Les Medes," p. 244).

6. The Egyptians not distinguishing l and r, it is doubtful if the next root should be aul or aur, aal or aar. Compare—

Aarzakana.	Aarnir (thrice).
Aurpalna.	Aripenekha.
Aarta.	Aurma (twice).

In Akkadian *ur*, *urra*, means "foundation;" *uru*, *eri*, or *alu*, is "city." The Cagataish *orun* means "place" (Vambery, p. 57); Turk اورو *œuru*, "enclosure." In the Tartar dialects l and r are sometimes interchanged. *Aul* is a common Tartar word for "camp;" Tscheremiss *ula*, *ola*, "town;" Mongol *ordu* "camp;" Khitan *woolutu*, Turkish آولو *aulu*, "courtyard;" Etruscan *Vol*, *Vel*, "town" or "settlement" (Taylor, "Etr. Res.," p. 346).

7. The root Ben or Ban is also clear in the words—

Anaubenu.	Sesban.
Atabana.	Aripenekha

It is, perhaps, to be compared with the Etruscan *phanu*, a "fane;" or with the Akkadian *pin*, "foundation," *apin*, "city;" Chinese *pin*, "settlement."

8. The root Beg, Bug, or Puk occurs in the words—

Sutekh-bek.	Pukiu.
Suki-beki.	

As the first of these words seems to contain the name of Sutekh or Set—a Hittite deity—Bek may mean a "shrine," like the Akkadian *ubigi* and the Malamir *bukti* (Sayce, "Malamir," p. 81). But, as already noted, the

Tartar root *Bek* means "strong," whence the Uigur *bekük*, "a fortress," and this may be the true meaning of the Akkadian and Malamir words.

9. The root Kan or Gan occurs as a prefix in two names, and suffixed two others—

Tepkenna.	Ganiab (or Kainab).
Shauraganna.	Kaniretu.

In Akkadian *gan, gin, gun, gina*, signifies "enclosure," perhaps the Tartar *jan*, "wall" (Vambery, p. 112). It recalls the Semitic word for "garden," but where suffixed can hardly be a Semitic word.

10. The word Kar, "fortress," is also recognisable in the names—

Atakar.	Karkamasha.
Karmata.	Tsatsakar.

In Akkadian *Kar*, *Kir*, *Khir*, *Gar*, or *Khar* is rendered "fortress" or "enclosure;" Mongol *Hur*, "enclosure;" Etruscan *Cære*, "town." The Turko-Tartar *Khar*, *Khor*, *Kür*, *Gür*, mean "to surround" (Vambery, No. 86, p. 81). The Finnic *Kar*, *Ker*, *Kir*, *Kor*, means "round" (Donner, i, p. 48). In Wotiak and Zirianian *Kar* means "town."

11. The word Aker, perhaps from the same root, occurs in—

Akershaua.

This recalls the Lapp *Aker* and Etruscan *Ager* for a "field" or "enclosure" ("Etr. Res.," p. 333).

12. The root Khar or Khal is probably connected with the two last. It occurs in—

Khalka or Khalukka (Chalchis).
Khalres or Khallis (Killis or Kharis).

It is perhaps to be compared with *Khal*, "town," as in Medic, Susian, and the Malamir dialects (Sayce, "Malamir," p. 105).

13. The word Kur occurs in Tamakur; Akkadian *Kur*, Malamir *Kurkha*, "mountain" (Sayce, "Malamir," p. 104); Basque *Kora*, "high;" Lapp *Kor*, "mountain;" Esthonian *Körge*, "high;" Tscheremiss *Korok*, Votiak *Gurez*, Permian *Keros*, "mountain." (Donner, i, pp. 35, 36.)

14. The syllable *Ma* occurs in—

Aama.	Mauraka.
Khatuma.	Mauthi.
Letama.	Mashaua.
Aurma.	Akama.

Lenormant ("Magic," Engl. Ed., p. 272) says that *Ma* joined to a town name means the region near a town. Lenormant and Delitszch give *Ma* as an Akkadian word for "country." Mr. Pinches informs me that it is a rare word. In Finnish *Maa*, in Vogul *Ma*, in Zirianian *Mu*, signify "country."

15. The word *Mur* occurs in—

Murlakhna.
Kamurupa (?).

Compare the Akkadian *Muru* and *Murub*, "city."

16. *Pil* or *Pir* is recognisable in—

Piltau.
Aunpili.
Aubillina.

This is probably the Ostiak *Pel*, Andi *pil*, Mongol *Boldek*, Etruscan *Falœ* "mountain" ("Etr. Res.," p. 330). In Samoyedic *filoio* means "high."

17. The root *Su* seems to occur in—

Buresu.
Tsaresu.
Tariunsu.

This is no doubt the Tartar *Su*, "water" (Vambery, No. 167, p. 154), as in the Tschuwash *Su*, "stream;" Turkish صو, *Su*, "river" or "water." The same root occurs also in Finnic languages (Donner, i, pp. 100, 157).

18. Ta as a suffix is recognisable in—

Tarita. Abta.
Aarta. Abata.

It may be merely a grammatical form like the Medic *ta*, Akkadian *da*, forming abstracts; but Ta is a widely spread Turanian word for "mountain," occurring as a suffix in names like Altai, Aktu, &c. In Etruscan it appears as *Te* ("Etr. Res.," p. 346); in Turkish as *Dagh* داغ. In Ostiak *tei* means "a peak" (Donner, i, p. 161).

19. Tama, a distinctive Tartar word, occurs in—

Tamakua.
Aatatama.
Tamakur.

In Khitan and Manchu *tama* means "enclosure" ("J. R. A. S.," xiii, ii, p. 124). In Cagataish *tam*, *tim*, is "a building" (Vambery, No. 179, p. 166). In Akkadian *Tami* is translated "shrine," or "building."

20. The root Tar seems clearly traceable in—

Tarebu. Tarita.
Tariunsu. Tarekh.

This is a common Tartar word for "narrow" or "gathering" (Vambery, p. 169). Compare the Turkish دره *dereh*, "valley."

21. The word Tep occurs probably in—

Tepkenna.

This is probably the Altaic *töbe*, Tchuwash *tübe*, "hill" (Vambery, No. 192, p. 178). Turkish تپه, *tepe*, "hill." It is also found in the Finnish *tuppura*, *tüpüle*, "a hill" (Donner, i, p. 159); and in the Mongol *dobo*, and Etruscan *Tepœ* ("Etr. Res.," p. 330).

22. Tur or Tul is probably to be found in—

Turmanna or Tulmanna.
Turbanda or Tulbanda.

In Akkadian we find *Tul*, "mound;" Hunnic *Teulo*, Etruscan *Tul*, "tumulus" ("Etr. Res," p. 211); but if the word be *Tur* (which is equally probable), we must compare the Akkadian *Tur*, "abode," and the common Tartar and Turkish root *Tur*, "to dwell," whence the Turkish طورمق *dourmak*, "dwell," and the Siberian, Mongol, Tartar, and Samoyedic *tura*, "tent" ("Etr. Res.," pp. 23, 344). In Finnic the word *tur*, "tribe," is no doubt connected (Donner, i, p. 130), and perhaps the Esthonian *tare*, "abode" (p. 135).

These roots are not peculiar to Hittite, nor do they exhaust the possible Tartar words recognisable in the list in question. The words *Kur*, *Gan*, *Ater*, and many yet more suggestive (*Palanda*, *Atarna*, *Arna*, *Perk*, *Gurus*, &c., &c.), recur again and again in the names of cities in Asia Minor, in Etruria, and even in Iberian Spain, wherever the Tartar stock to which the Hittites belonged, spread itself throughout Western Asia and Southern Europe. (*See* Hyde Clarke, "Inhabitants of Asia Minor," 1865.)

(4.) *Grammar.*

Before proceeding further, it is necessary to consider for a few moments the probable grammar of the Hittite language, by aid of the hints obtainable from the preceding lists, and through a comparative study of the grammars of Tartar, Ugric, and ancient Turanian languages. Languages and writing grow together. The earliest stage, in which grammar hardly existed, would be expressed by picture writing. Agglutinative languages can be expressed by hieroglyphics, but this is not the case with inflected languages, which require syllabaries, and which are best expressed by the alphabet. Thus a hieroglyphic system belongs to an agglutinative language; and to such an agglutinative tongue the hieroglyphics of Syria and Asia Minor are properly ascribed.

The most distinctive features of Turanian speech are: 1st. Agglutination, or the absence of inflexion. 2nd. Post-positions, or the placing of the root before its agglutinated syllables (though this is not an invariable rule). 3rd. Vowel harmony in derivatives, the weak root or agglutinated syllable agreeing in vowel sound with the noun-verb root. This does not

apply, as a rule, to compound words. In Medic such harmony is suggested by Oppert ("Les Medes," p. 39), and in Akkadian it is clearly visible in the pronouns and post-positions (*see* Bertin, "L'Incorporation Verbale"). 4th. The distinctions of sound are much less precise in Turanian than in Semitic languages. Thus in Medic, Oppert only recognises eleven consonantal sounds, while, in the Tartar languages and in Basque, the interchangeability of various letters is equally remarkable. The peculiarities of the Cypriote syllabary seem to show that the sounds of vowels and consonants were also indefinite in Hittite.

The Medic and Akkadian differ in syntax from the living Turanian languages. The arrangement of the sentence, the position of the pronouns, and one or two other important particulars, show this difference; but the ancient and living languages agree in many equally important particulars, such as the position of the plural, the placing of the verb at the end of the phrase, and the use of post-positions.

In Akkadian, Sumerian, and Medic the order of the sentence is *object+subject+verb*, whereas in Turkish it is *subject+object+verb*. In the more certainly understood Etruscan texts the ancient order seems to be observed. In Hungarian the rule is very variable (Singer, "Hungarian Language," p. 87). In Basque the order is the same as in Turkish (Van Eys, "Basque Language," p. 49).

The use of "packets" in Akkadian, or, in other words, the rule that only the last word in an enumeration takes the case suffix is observable in Basque (Van Eys, p. 45), and it survives to a certain extent also in Turkish (Redhouse, "Turkish Language," p. 165).

The arrangement whereby the defining word (such as the genitive) precedes the defined word, is a distinctive mark of Turanian speech, but in the ancient languages the rule is not inflexible. In Akkadian we find the genitive both preceding and following, and the genitive affix is in the first case omitted, but added to the genitive when it follows (*e.g.*, *Ma-ir*, "city of the ship;" *Damkina*, "woman of the earth," &c.). In Medic, also, it is found that the genitive may follow or precede, and when it follows, the genitive suffix is attached to it (Oppert, "Les Medes," p. 106). In Turkish there are four possible arrangements. The genitive with its suffix sometimes precedes (Redhouse, p. 163), and this is also the case in Basque (Van Eys, p. 46).

In Tcheremiss the genitive, without case affix, precedes its nominative, as in Medic. In Votiac it is placed indifferently before or after ("Magic," Engl. Ed., pp. 284, 285). In Hungarian the prefixed genitive without mark of case also occurs (Singer, p. 10).

In Hittite the genitive appears in some cases to precede without any case suffix (*see Kheta-sar*, "Chief of the Hittites;" *Khataai*, "House of the Hittites;" *Sutekh-bek*, "Shrine of Sutekh"). In other cases it seems to follow (as is clear from the bilingual boss), which may lead us to render *Aurpalna*, "City of the Chief;" *Turmanna*, "Camp of the King," the final *na* being the case suffix. In the cases *Tartisebu* and *Akitisebu*, the prefixed word appears to have an affixed particle, *ta* or *t*, which is

either a case ending or the sign of the abstract (*ta* in Medic, *da* in Akkadian).

The position of the adjective is also very variable in the languages under consideration.

In Medic the adjective follows its noun, but in the earlier Akkadian it appears sometimes to have preceded it. In Chinese the adjective precedes the noun (Max Müller, "Science of Language," 5th edition, p. 122), and Lenormant regards this as the more ancient Turanian structure. In Turkish all the adjectives precede the noun and remain uninflected (Redhouse, p. 68). In Basque, on the contrary, the adjective follows, and Lenormant has pointed out ("Magie," French Edition) that this archaic language much resembles Akkadian in structure. In Hungarian the adjective may follow or precede, but when preceding remains invariable (Singer, p. 26). Judging from the words *Gallu* and *Lugal*, it would seem that the prefixed adjective may also have occurred in Akkadian. The signs *a* and *ga*, and *li*, are adjective affixes in Akkadian, and in some living tongues, when the adjective follows the noun.

The lists under consideration seem to show that in Hittite, as in Hungarian, both positions are possible for the adjective. Khalukka may mean "great town" (*ukka*, "great"), but Galbatus might mean "great ruler" (*gal*, "big"); Aunpili, "mountain town," may present an adjective, *pili* from *pil*, "a hill." Tamakua, "lofty building;" Lalli ("princely") and Tarkhulara are other possible instances of Hittite adjectives. When preceding the noun, we see, from what has been said above, that the adjective would probably present no affix, but consist simply of the root.

Gender, properly speaking, does not exist in the languages to be considered. Even the pronouns have no gender in Akkadian or in Turkish. There is no gender in Basque, Hungarian, or Turkish, or in Akkadian or Medic. The sex may be distiuguished, in some cases, by a prefix, like the Hungarian male prefix (Singer, p. 82) for animals, or the Turkish female prefix *dishi* (Redhouse, p. 51). In Akkadian there appears to have been a male affix (*e.g.*, *lu-nit*, "sheep-male"), like the Hungarian female affix *ne* ("wife").

The position of the plural is the same in the ancient and in the living languages, but the words used for plurals are very various. In Medic the plural affixed to the root precedes the case suffix (*Ain-ip-irra* "of the Kings"), and the same order occurs in Hungarian and in Turkish (*see* Sayce, "Malamir," p. 72, Singer, p. 14, Redhouse, p. 51). I believe that this was clearly the case also in Hittite (see the second word on the first Hamath stone when the plural precedes the termination *li*).

The position of the verb at the end of the sentence distinguishes the languages under consideration from the Semitic and from the Egyptian.

The root, properly speaking, appears to be the imperative, as in Turkish, and the noun may be either the root or may take an affix, such as *Ak*, *Pi*, *Es*, representing the agent or distinguishing the case. From one point of view there is no true verb in the ancient languages, and the

tense is said by some scholars not to be distinguished in Akkadian. In Basque the past tense is distinguished by an affixed *n* and the infinitive is unknown (Van Eys, p. 47). In the earlier languages the passive is represented by the auxiliary *du*, "come" or "become" (literally "go," as in many early languages—Max Müller, "Science of Lang.," 5th ed., p. 339), and the active by *ma*, "be." The auxiliary, with these exceptions, precedes the verb in Akkadian, which is not the case in the later living languages. A reduplication of the root is said by Max Müller to be frequently used for the past. Such re-duplication occurs in Akkadian (*e.g.*, *gamgam*, *dudu*, &c.), but does not seem to have been recognised as a mark of tense. The adverb and the adjective are the same in Turkish (Redhouse, p. 73), and were no doubt indistinguishable in the ancient languages. The periphrastic construction, which Lenormant considered a striking peculiarity of Akkadian ("Magic," Engl. Ed., p. 278), occurs in other languages of Turanian origin, as, for instance, in the Basque (Van Eys, p. 34).

The syntax of the verb and the positions of the pronouns are of special importance to our enquiry.

In the more modern languages the verb is conjugated, the personal suffix following the root, but in the ancient Akkadian this is not the case. The pronoun there precedes the root, just as it does in Basque, without personal suffix. Lenormant remarks that the old structure, with a simple verb root, preceded by the governing pronoun, still exists in Mongolic and in the Manchu-Tartar.[1] In Chinese, also, the governing pronoun precedes ("Magic," Engl. Ed., p. 285).

In Medic, we find the order of the transitive verb to be governing pronoun + governed pronoun + verb (*U-ir-halpiya*, "I him killed"), which is the same as in Akkadian. In Basque the order would be "him killed I," and in Turkish "I him killed-I." In Etruscan the order is not so clear, but appears to have been "him I killed." In Hittite we may expect the pronoun to precede the simple verb root, and the governing pronoun probably preceded the governed, as in Akkadian or Medic.

The pronouns are very constant parts of speech in these languages. Being originally nouns the words came with the advance of language to be used as demonstratives, and then specialised as pronouns. M. Bertin has shown this in the case of Akkadian ("L'Incorporation Verbale"), and it is also noted in Medic and in Basque (Van Eys, p. 16). The possessive pronoun is affixed to the noun in Akkadian and in Medic, just as in Turkish, in Hungarian, or in Basque.

The position of the numeral is very constant. It precedes the noun, and the ordinal, &c., are distinguished from the cardinal by affixes.

The use of post-positions instead of prepositions is one of the distinctive features of the languages under consideration. These words, as will

[1] Dr. Oppert conjugates the Medic verb. Dr. Sayce disputes this ("Malamir," p. 77). The Basque retains the old structure in the intransitive verb, which has no personal suffix (Van Eys, p. 31).

appear later, are wonderfully constant in the various languages. There are, however, certain preposed syllables (such as *gik* and *pir*) in Medic which appear to be intensitives. These are to be compared with the Turkish intensitive prefixes to adjectives, and are said by Lenormant to be also traceable in Ostiak, Hungarian, Lapp, and Esthonian. The precative or exclamation is also preposed. The conjunction naturally is not.

Two preposed syllables in Akkadian and Medic are regarded by Lenormant as unknown in later languages. One of these is *It* or *Id*, supposed to mark locality; the other is *ki*, which is apparently nearest to the English "as" or "who." In Turkish *ta* and *ki* are suffixes of a somewhat similar character. In Hungarian *az* prefixed is the definite article.

These notes give us a fair idea of the probabilities of Hittite grammar, and it will appear that the evidence of the texts quite agrees with the general principles laid down.

(5.) *The Syllabaries.*

The sounds belonging to the Hittite emblems are to be recovered mainly from the Cypriote and other allied syllabaries. This is generally admitted, but a few general remarks may be necessary.

The syllabary as a rule gives us only one sound for one emblem. Now as regards at least the strong or noun-verb emblems in the Hittite, it is evident that they would have been connected (just as is the case in cuneiform) with more than one sound. It is improbable that the language could have been so poor as to possess only one word for any object, and indeed the evidence of the lists just consulted proves that this was not the case. It is pretty clear, therefore, that more than one sound may have survived in syllabic forms derived from a hieroglyph, and the case will be considerably strengthened by the discovery of two or more syllables having a common origin. Thus the Cypriote *pi* has the same form as the Carian *s*, both being derived from an emblem which appears to have been a personal suffix in Hittite.

On the other hand, more than one emblem is used for certain sounds in the Cypriote. There are two forms of *Le*, of *Pe*, and of *Pi*, which it is almost impossible to regard as derived from one original hieroglyph. The reason is found in the well-known fact that in Tartar languages, as in Chinese, roots of very different meaning have often the same or very closely similar sounds.

The Cypriote syllabary as at present known consists of fifty-four open syllables (*i.e.*, single consonants followed by single vowels), to which it has been proposed to add four closed syllables—*nos*, *man*, *gon*, *ros*. The existence of these four last appears to me to be more than doubtful. In the use of the syllabary by the Greeks double consonants are not represented (*ll* is *le*, *mm* is *me*, *gk* is *ke*, &c.), whereas closed syllables would have enabled the writers to overcome this difficulty. In many cases the *n* is omitted (*A-to-ro-po-se*, for Anthropos, &c.), and it will be noted that

three out of the four supposed close syllables include this letter. They may, therefore, I believe, be quite as properly read *os* (or *so*), *ma*, and *go*. As to *ros*, its existence is still problematical.

The sounds of the syllabaries are as indefinite as were those of the language originally represented. K, C, G and Kh are not distinguished, nor are T and D, or P and B, or M and V, while there is good reason to suppose that L and R were occasionally interchanged. All these sounds are equally indefinite in Akkadian and in Medic, as also in the living Tartar dialects. The vowel sounds appear also to have been indefinite. Thus the emblem *Mi* had also the sound *Me* or *Ma*, as we see clearly from its use to spell the Semitic word Melek or Malak.

In Cypriote the inverted vowel sound is not found, but the original hieroglyphs—at least in the case of the weak roots—probably possessed such inverted sound. Thus, in Akkadian, the third pronoun appears as *Na*, *Ne*, *Ni*, *In*, *En*, *An*, in accordance with the law of phonetic harmony, while such words as *Um*, "flame," and *Mu*, "burn," give a similar inversion. So in Tartar languages the inversion is commonly found.

The final *n* and *m* are weak letters very often dropped in both the ancient and the living languages. Hence, even in spelling Greek, we find these letters dropped as finals. They may often have belonged to the original hieroglyph, and in certain cases, such as the short *a*, *e*, *i*, which are used also for *an*, *en*, *in*, it is legitimate to restore the *n* to the hieroglyph.

The Hittite system appears to have consisted of about 120 emblems, and the syllabaries would thus allow of our recovering about half the sounds. The other half may have been closed syllables, or even polysyllables, which would account for their disuse in a late syllabic system.[1]

The emblems may be divided into strong and weak roots or noun-verbs, and attached grammatical forms. I have already pointed out that the suffixes on the texts are generally smaller than the noun-verbs, and the packets indicated by single emblems and by phrase dividers. The sounds may be taken in order as follows :—

(6.) *Weak Roots.*

These prefixes and suffixes are more valuable than the nouns, because of the greater frequency of their occurrence and because of the grammatical indications recognisable in their relative positions.

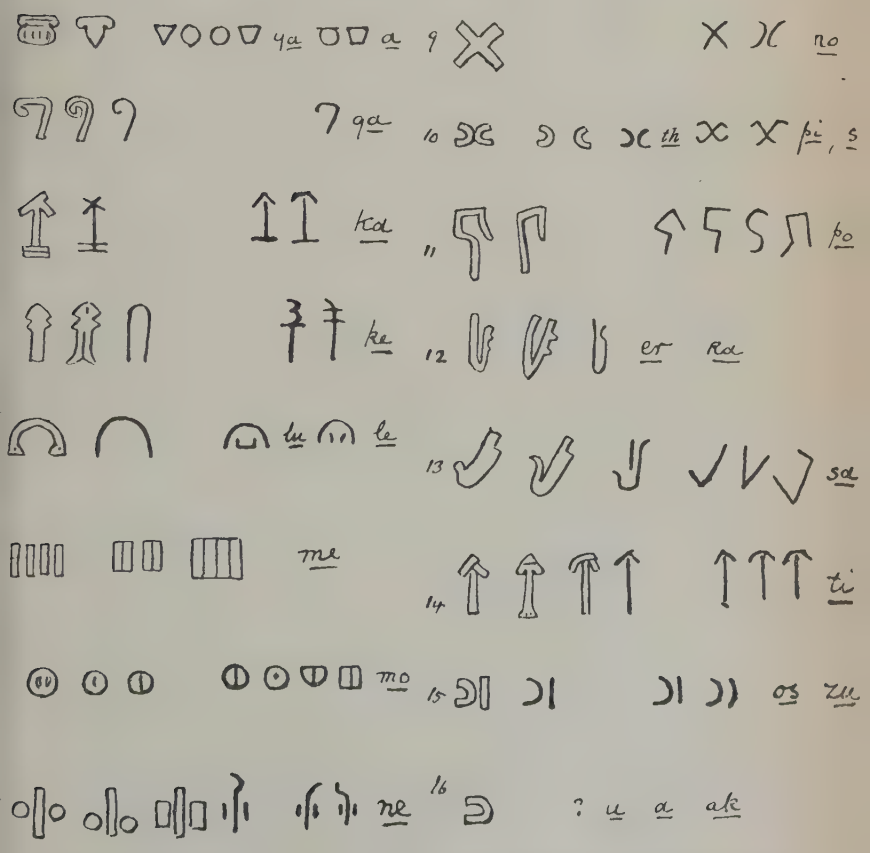
Aa, *Ya*, *Au*.—Emblem, a vase. In Cypriote it has all three values. In Carian it stands for *a*. In Akkadian *a* means "water." Susian, *a*. Vogul, *ya* or *ye*. Zirianian, *yu*. The emblem occurs more than forty times in Hittite texts, and may at times be a noun, at times an affix. So in Akkadian the emblem *a*, originally representing water, is used not only for the noun but also for the participle termination *a*. In twenty cases the emblem on the Hittite texts appears to be a prefix

[1] Thus in the Medic and other simple systems we find about half the emblems to be open syllables and half closed.

at the top of the line, in eight it is in the middle, and in twelve at the bottom, but when at the top it is sometimes part of a suffix of a word occupying two columns (as in the earliest cuneiform texts). In sixteen cases we find the group *a-ne* or *an*, perhaps like the Etruscan termination *an* for the participle ("Etr. Res.," p. 287); *an* or *van* is a common participial form in Akkadian, in Medic, and in Turkic, Mongolic, and Finnic languages. In Hungarian *Van*, "to be," is used for the auxiliary "to have" (Singer, p. 10).

The emblem appears also to occur for a noun in the names of deities on the Hittite texts.

Weak Roots.



Ga.—Emblem, a crook. This is a rare Cypriote sign. In Akkadian *ga* means "turn." In Tartar languages *ag* or *eg* means "to bend" or

"curve" (Vambery, No. 31, p. 27). There are fourteen known cases on the texts. In one the emblem is a prefix, in the rest apparently a suffix. In Akkadian *ga*, *gi*, *gu* is an exclamation—prefixed; as a suffix *ga* forms the adjective (Sayce, "Assyr. Grammar," p. 20, No. 227), like the Medic *iki* and Susian *ak*.

Ka.—The emblem is called a shaduf by Sayce. It appears to be a suffix of case occurring sometimes at the close of an enumeration, or "packet." At Hamath there are thirty instances, but only twelve on other monuments. From some texts it is entirely absent. In Akkadian *Ku* means "to" or "towards;" Medic *ikki*, "to;" Susian, *iki* or *ki*, "with." In Turkish we have the dative *ke*, *ga*, or *ge*; in Hungarian the suffix *ig*, "as far as;" in Basque *ko* or *go* means "from," and *ka* "with" or "at." At Ibreez the text by the god's head begins *Ka-ne*, or *Kan*, recalling the Etruscan *Ken*, "this," which commences inscriptions, and the Akkadian *gan*, "this."

Ke.—The emblem has a phallic appearance, recalling the the Akkadian *Uk*, "male," from which root the affix of the agent common to so many Tartar and Finnic languages may be derived. In Basque the affix of the agent is *-k*, and many Turkish nouns have this termination. It is also observable in Susian and at Malamir (Sayce, "Malamir," p. 74). There are about forty cases on the Hittite monuments, in three of which it seems to be clearly a prefix, recalling the peculiar Akkadian prefix *Ki* already mentioned. It also seems to occur re-duplicated in twelve cases, to be read *Keke* or *Kek*, recalling the Akkadian *Kak*, "to make." In three cases we find a suffix *Me-ke* or *Mak*, recalling the Turkish *mak* or *mek*, which forms the infinitive, the patient, and the participle. In Medic the termination *meske* seems to be of similar value; at Malamir, also, we find the suffix *mak* (Sayce, p. 74). The combination *Ke-ti* occurs once (and perhaps thrice), perhaps the Akkadian *Kit*, "with," Medic *Kutta*, "also." We also find *Ke-ga* apparently as a prefix, like the Medic intensitive *gik*, the Turkish چوق, *chok*, "much." The emblem is often suffixed to emblems apparently nouns, such as *Tarake*, *Anake*, &c., on the Hittite texts.

Lu or *Li.*—This appears to be a yoke. Compare the Akkadian *lu*, "yoke," perhaps the Tartar *Il*, *ol*, *ul*, "to bind together" (Vambery No. 42, p. 39). It is always an affix, like the Akkadian *li*, said by Lenormant to represent action done by a person ("Magic," Engl. Ed., p. 272). In Turkish, لو *lu* and لي *li* is the termination of adjectives of possession. In Yakut *li* is the adverbial suffix. The nearest English word appears to be "with." In Hungarian *ul* is an adjective ending (Singer, p. 86). This emblem in Hittite occurs more than once repeated in an enumeration, apparently of adjectives or adverbs governed by a case-ending *ka*. There are more than fifty cases of this emblem. In seven cases it is preceded by the plural *me* representing a plural adjective. In four cases we find *ne-li*,

perhaps like the Etruscan *nal*, meaning "he with," as a termination of proper names.

Me.—The emblem consists of four strokes. Its value is derived from the bilingual. It cannot represent the number 4 because it is not a prefix, and it is very improbable that No. 4 should occur frequently on texts where no other numbers are represented. I believe it to form the plural (as in other hieroglyphic systems) like the Susian, Akkadian, and Malamir *me*[1] (Sayce, "Malamir," pp. 40 and 75). There are about thirty known cases on the texts always as a suffix. The combinations *meke* and *meli* are mentioned previously. In two or three cases we find *Me-ti* or *Met*, perhaps like the Turkish *meh*, &c., which terminates names of actions.

Mo.—The emblem might represent the *Kteis*,[2] recalling the Turkish ـم *âm*; Tartar *Am*, *Em*, "female;" Akkadian *um* or *umu*. This emblem occurs both prefixed and suffixed, and seems to be the personal and possessive pronoun "I" and "me." In Akkadian it is found as *Am*, *Im*, *Um*, *Ma*, *Me*, *Mi*; in Medic *U* or *Vu*, "I," and *mi* "my;" Susian *Ma* or *Va*, "I;" Malamir *mi*, "mine;" Etruscan *ma*, "I" ("Etr. Res.," p. 284); Ostiak *ma*, Zirianian *me*, Samoyed *me*, "I." It is the Turkish ـم- (*-m*), "my," but in Basque it becomes *ni*, Finnish *ma*, Esthonian *ma*, Lapp *mon*, Tcheremiss *min*, Mongol *bi*, Manchu *bi*, and old Japanese *wa*. There are forty-eight known occurrences on Hittite texts, in most of which the emblem is a suffix. Texts occur, however, without a single occurrence which would agree with its use as a pronoun. Thus it is not found in the descriptive texts at Ibreez, nor is it known on seals (except Schlumberger, No. 18). The combination *mu-ne* occurs thrice, perhaps for "I him" or "me he," or perhaps the verbal termination—Medic *van*, Tartar *men*, Turkish *men*, Hungarian *van*, Akkadian *men*; but where it may be prefixed it recalls the frequent Akkadian prefix *mun*.

Ne.—This seems to represent the phallus, and it is the commonest of all the Hittite emblems. There are at least ninety-three occurrences, in twenty-four of which it is clearly prefixed. Thus, at Ibreez, it begins the text behind the King's head. The original meaning "man" or "person" survives in Turkic and Ugric speech (*see* the Etruscan *enna*, "Etr. Res.," p. 339). In fourteen cases this emblem is prefixed to the heads of animals on the Hittite texts, but these heads also occur without it. In Akkadian *ni* is often prefixed to the subject (Bertin, "J. R. A. S.," xvii, Part I). There are sixteen cases of *ane* as noticed already, four cases of *neli*, and one case of *nake*. This latter recalls the Etruscan *nak*, Hungarian *nak*, Ostiak *nak*,

[1] *Me* and *Mes* are both plurals, the second perhaps personal.

[2] It also closely resembles the cuneiform determinative for "female" in its oldest form, which had the value *Muk*, among others.

meaning "to" ("Etr. Res.," p. 309). In this instance *Zu-nâk* appears to mean "to thee"—see the Hungarian *nak*, *nek*, "belonging to" (Singer, pp. 9, 12). Also occurs in Akkadian.

In Akkadian *Na*, *Ne*, *Ni*, *Nu*, *An*, *En*, *In*, *Un*, are forms of the pronoun "he," "him," and (as an affix) "his." While the postposition for the genitive or ablative is also *na*. In Etruscan *na* is the genitive suffix. In Basque *-n* is the ablative and the demonstrative or relative pronoun (Van Eys, pp. 15, 16). *N* is the dative in many Turkic languages, and in Finnic signifies "belonging to." In Turkish it is the genitive, and forms the third personal pronoun. In Susian we have *na*, "of," and *ni*, "his;" and in Medic *na*, "of." The emblem also occurs prefixed to signs of action, as in Akkadian we have *Nigin*, "surround," from *gin*, "enclosure." There can be little doubt that the emblem in Hittite has the same force as in the other languages of the same class, and we have already seen that *na* appears to have been the Hittite genitive case ending in the names of towns.

No occurs only once, and resembles the sign of opposition in cuneiform and in Egyptian. It is a prefix—the proper position of the negative. Akkadian *nu*, "not;" Medic and Malamir *inne*, Turkish ﻧﻪ *ne*, "nor."

Pi or *S*.—The first is the Cypriote, the second the Carian value. There are sixteen or seventeen occurrences always beneath larger emblems, apparently nouns. The emblem seems to represent a pair, and might represent a dual or plural. Compare the Tartar *äb*, "pair" (Vambery, No. 32, p. 29), the Akkadian *bi*, and the Basque *bi*, "two." The value S would also agree, since S is a Finnic and Tartar plural probably also recognisable in Akkadian, derivable from a root meaning "to cleave," as is also the dual *äb*. In Akkadian *ib* and *bi*, *es* or *se*, are personal affixes, and *ba*, *be*, *bi*, *bu*, *ab*, *eb*, *ib*, *ub* is a pronoun, "that one" (Bertin, "L'Incorporation Verbale," p. 3), which Lenormant says forms the absolute case ("Magic," Engl. Ed., p. 274), like the Lapp *b* or *v*, for the accusative, Tcheremiss *p*, Samoyedic *p*. Manchu *be*, and Turkish بو *bu*, "this one." In the Malamir dialect and in Medic, *pi* is supposed to be the relative (Sayce, "Malamir," p. 91), like the Akkadian *aba*, "who." In Finnish *pi* is the verbal pronoun, Esthonian *b*, Tcheremiss *be*, Yakut *by*, Yenissei and Samoyedic *ba*, "he who." The value S may be compared with the adverbial affix, Akkadian *as*, *es*, Tcheremiss *-s*, Lapp *-s*, Votiak *sa*, Mordvine *-z*. In Hungarian *as* or *es* is an adjective termination, and also stands for the agent (Singer, p. 85).

We have already seen that Hittite and other proper names often end in *s*.

Po.—This appears to represent a crook turned the opposite way to *ga*. Compare the Tartar root *Boy*, "to be bent" (Vambery, No. 227, p. 210).

There are not more than twelve cases, in two of which it may be prefixed. It is perhaps to be compared to the Turkish *bu* بو "this one," or the Medic *appo*, used for the relative (Oppert, "Les Medes," p. 277).

Ra or *Er.*—The value may be derived from the bilingual. There does not seem to be any clear occurence at Hamath, and it is absent from some other texts. The emblem looks like a cord or whip—compare the Tartar *ör*, a "rope," "twist," or "pigtail" (Vambery, No. 32, p. 28). There are about fourteen instances on one text (J. I.), and about twenty in all, in which this emblem appears infixed or suffixed.

Compare the Akkadian *Ra*, *Ri*, "to," "of," or "towards," incorporated in the verb. In Medic *Ra*, *Ri*, *Ir*, forms the adjective, the accusative, and the possessive (Oppert, "Les Medes," pp. 51, 279, 280). It occurs also at Malamir (Sayce, p. 102), and *Ir* means "him" in Susian and Medic. The case meaning seems to be connected with the old verb *Ra*, "go," the personal meaning would be from the root, *Er*, "man." In Basque, *ra* means "towards," and in Hungarian *ra*, *re*, means "upon;" on the Hittite texts we find the verbs, *In-tu-ra*, "gives to," and *In-du-ra*, "goes to;" also in four or five cases, *Ti-ra* or *Ter*, and once *Termu*, perhaps the Malamir *Tar* and *Tarma*, "all" (Sayce, "Malamir," p. 110).

Sa.—This comparison is due to Professor Sayce. The Hittite emblem seems to be a hook or sickle. *Sa* is a common Turanian word for a cutting instrument, as in the Abase *Sa*, "sword," Tcherkess *sch*, "knife," from the root *az* or *aj*, "to cleave" or "open" (Vambery, pp. 1, 26; Taylor, "Etr. Res.," p. 335). There are some fourteen or fifteen cases of occurrence on the Hittite texts, in none of which it is clearly prefixed. *Ti-sa*, *li-sa*, *ne-sa*, *sa-li*, *sa-ne* all occur. In Akkadian, *sa* means "in;" Chinese *sa*, "interior;" Tartar *is üs*, "within;" *tis* means "interior" (Vambery, p. xii., and No. 38, p. 35). In Basque, we find *-z*, "with" or "by." The participial ending in *s* is common to Hungarian, Tartar, and Turkish, and occurs in the Etruscan *as*. This seems to be a case ending in Hittite, *ne sa*, meaning "with him." *Tisa* may be compared with the adverbial ending *Thasa* or *Thas* in Etruscan ("Etr. Res," p. 287); and *sa ne* might be compared with *isne*, "then," in Medic (Sayce, "Malamir," p. 104).

Ti.—There are two emblems very like yet distinct in Hittite, one an arrow, the other perhaps a spear. The arrow occurs ten times, five occurrences being as a prefix. The spear twenty-five times, eleven probably as a prefix, eight apparently infixed, and six affixed. The Tartar root, *At it*, means "to shoot" (Vambery, No. 28, p. 25), which agrees with the form of the emblem.

In Akkadian and in Medic the syllables *It*, *Ta*, *Ti*, occur prefixed and affixed with a locative meaning. Akkadian *ta*, "at," "out of,"

"by" (Bertin, "L'Incorporation Verbale," p. 3; Lenormant "Magic" Engl. Ed., p. 273). *Id* is a localising prefix in Akkadian; *It* or *Iz* in Medic; Etruscan *Eth* a localising prefix ("Etr. Res.," p. 327), and *Th* an abstract termination in Etruscan; Medic *ta*, Akkadian *da*. In Turkish, the locative suffix تا *ta*, "as far as" or "so that," still exists (Redhouse, p. 156), and *da* is the sign of the locative case "in" (p. 52). The combination, *Ti-ka*, on the Hittite texts may mean "all" or "only," and *ti-ke* might be compared with the Basque *tik*, "of" (Van Eys., p. 10).

It would seem that *Ti* prefixed is a locative, infixed it would form the abstract (compare the Medic *hal-t-ik*, "enmity," from *Khul*, "evil"). Affixed it may be the case ending meaning "in," "at," or "from."

Zu, or *So*, or *Os*.—The sound is not very clear. The value *nos* may be rejected for reasons already given. There is, however, a Cypriote *nu*, which is also similar to the Hittite.

This emblem always appears at the top of the column. When it occurs it is often repeated, but it is entirely absent from whole texts. Both these indications point to a pronoun. There are fifty-eight cases, all occurring in six texts. It is not found at Ibreez, or at Hamath, or on the seals. At Tyana there are twelve instances in four lines, and at Jerabis five instances in four lines, in one text, and ten in four lines, in another text. It appears twenty-two times on the Merash lion, and five times on the Babylonian bowl. There are six known texts from which it is absent. The Babylonian bowl is allowed to be a dedicatory text or invocation, and if so, this emblem might well stand for the second person singular.[1] There are two cases in which it is re-duplicated, which might be the second person plural.

In Akkadian *za*, *zu*, means "thou." In Basque, *zu* is the plural "you" (Van Eys., p. 23), in Finnish *sa*, Esthonian, *sa*, Mongol and Manchu, *si*. In Turkish we find *shu* شو "this" سن *san* "thou" سز *siz*, "you." The latter may be compared with the re-duplicated *zu-zu* (or *so-so*), of the Hittite texts. As in other languages so in Turkish "you," the plural, is often used for "thou," the singular, as a mark of respect (Redhouse, p. 82).

These fifteen signs, the values of which I first determined from the Akkadian, are therefore apparently supported by a further comparative study of the living languages, and it appears to me that, taken with the

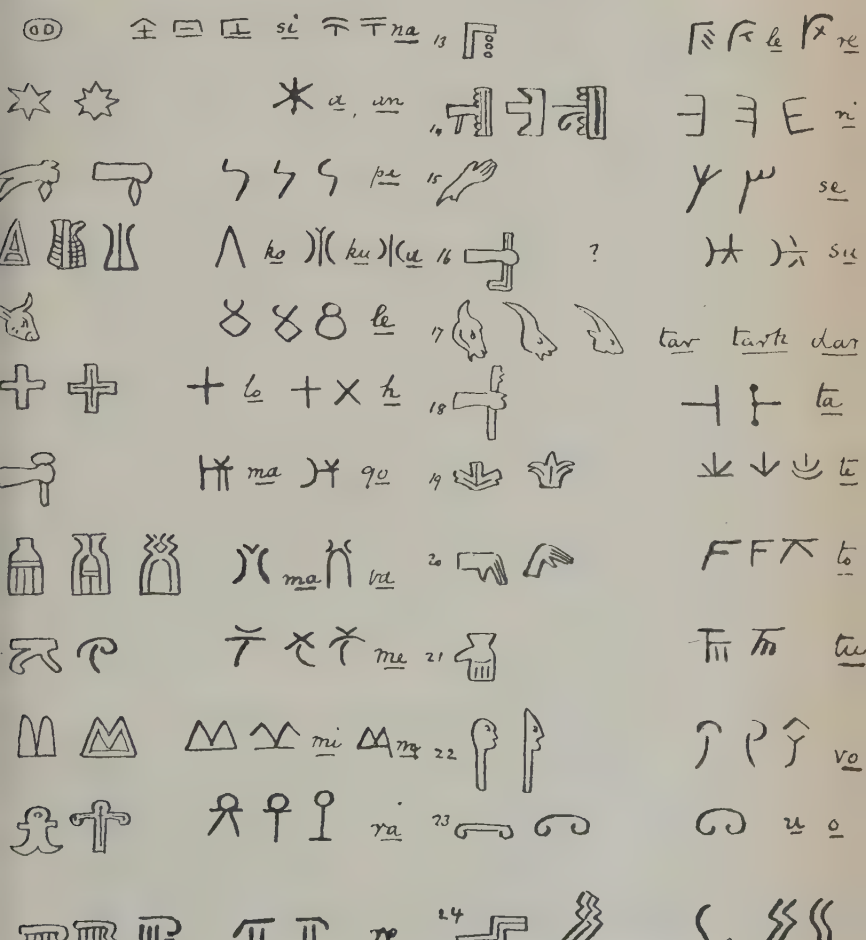
[1] Applying the rules here detailed to the Babylonian bowl, I obtain the following approximate rendering: "O may the spell make the God (Ea?) come nigh . . . to thee alone thou King above, thou . . . called enlightener Creator . . . Tammuz . . . fire God the (memorial?) made for thee invokes thee."

evidence of royal names and town names, they serve to make a very strong case for the proposed decipherment.

(7.) *Strong Roots.*

By this term I mean the noun and verb emblems to which the preceding are attached, using a term which is already accepted, and which

STRONG ROOTS.



[1] No. 16 on the 1st plate occurs more than 30 times on the monuments as a suffix usually. In 7 cases it follows *Ne*, and in 5 cases or more it follows the

answers to the Chinese distinction of "full" and "empty" roots. The arrangement of the emblems in Hittite is just the same as in the earliest cuneiform, except that the words are not divided by vertical lines of separation. The texts are boustrophedon, the emblems usually facing the commencement of the line. The strong roots have much larger emblems than the suffixes. The "packets" are indicated by single case emblems, which follow. The word often occupies two columns in the line. A slanting stroke shows the end of a word or clause. The words do not end always with the line (as is easily proved), which is also the case in Medic and at Malamir, but is said not to be so in Akkadian texts.

An or *Is.*—This emblem, which appears to represent "Deity," I have long supposed to be a conventionalised eye. It is quite possible that it may have had both sounds. The word *An*, for God, is found in Akkadian, Susian, and Medic; perhaps the Turkish ﻗﻨﺎ *Ana*, "Saint;" Etruscan *An*, *Un*, *Uns*, "God;" perhaps the Tartar *An*, "being." The Eye is an Egyptian divine emblem. The value *Is* or *Si* would recall the Akkadian *Si*, "eye" or "see;" Chinese *Si*, "eye;" Akkadian *Es*, *Is*, *Issi*, "brightness;" Medic *Siya*, "to see;" Tartar *jis*, *is*, "bright" and "light" (Vambery, No. 135, p. 124), this root is much used to signify deity. It occurs in Finnic languages (Donner, i, p. 20; ii, p. 31, 32). The Etruscan Æs-ar (plural), the Siberian *Asa*, Yenessei *ais*, *eis*, *es*, signify "God" (Taylor, "Etr. Res.," p. 145). Castren says that Es is the word for supreme deity among all Altaic peoples. Altogether there are thirty-two known instances on the Hittite texts, always as a prefix. In one of these it appears to be re-duplicated like the Akkadian *An-an*, "gods."

An or *A.*—Emblem a star. It occurs on seals only as yet. In one case it replaces, on a seal, the last-named emblem in the name of a god, which is a strong argument that the preceding *An* means "deity." The cuneiform *An*, "god," is also from a star hieroglyphic.

Be.—The arm and dagger. Only found nine times, in six cases with the foot (probably for the passive) following. See the Akkadian *Be*, *Bat*, "slay," "die;" Tartar *ub*, "strike," *Bet*, "cut" (Vambery, Nos. 153, 217, pp. 142, 203).

Dim.—On the bilingual. Much resembles the cuneiform *Dim.*

Ko and *Ku.*—Two forms of Tiara. There are more than twenty occurrences. On the bilingual, the tiara has the meaning "king." Another possible value is *Uu*, as in Lycian. In eight cases the emblem is re-duplicated. In one case we find Tar-ko (apparently for the name of a god); in another two cases the tiara precedes a king's head, as if equivalent to the re-duplicated tiara. There is also a seal with a king's figure accompanied by a re-duplicated tiara, and there can be little doubt as to the meaning of the emblem.

altar. I believe it to have had a simple vowel sound, and to be perhaps a conjunction. It is sometimes absent from a whole text. Medic conjunction, *ak*, Akkadian *ua* (Lenormant), Turkish *ve*, "and."

As regards the sound, the existence of a word *Ku* or *Ge* for "prince" is admitted by Pinches, Bertin, Fox Talbot, and others, in Akkadian (*See* No. 462 in Sayce's "Assyrian Grammar," p. 40, *cu*, "prince," "precious"); Norris and Lenormant also admit the word in Medic, though Oppert prefers to use other synonymous words. The words *Ak*, *Uk*, *Aka*, are also rendered "king" by various students, the latter occurring in the name of the Hittite king, Akitisebu, and in the Turkish اقا *Aka*, "prince." The re-duplication may be compared with the term *Khakhan* applied to the chiefs of the Khozars, west of the Caspian. *Ku*, in Akkadian, also means "high," "bright," "silver," "precious." In living languages we may compare the Tartar *ag*, *eg*, *ök*, "Lord" (Vambery, No. 30, p. 27), and "high" and "strong" (pp. 6, 9); *ege*, "prince," and other words, from the same root, meaning "bright," "precious," "white," "silvery." In Finnic languages the same root occurs as in the Ostiak *Khu*, "long," and the root *Koi*, "bright" (Donner, i, pp. 1, 9), is perhaps connected with *Ku*, "fat" or "thick," and the Basque *Goi*, "height." In Chinese also we find *Kok*, "high." The syllable in Cypriote has the sounds *Ko*, *Go*, *Kho;* and perhaps *Kha*, "prince," in Akkadian, may also be compared (the common Tartar *Khan*, Chinese *Kon* or *Kan*). As regards the value *Uu*, compare the Akkadian *U*, "Lord." Tartar *uu* or *ou*, "important" (Vambery, No. 8, p. 9).

Le.—The bull's head. This emblem occurs fourteen times. In four cases *Ne* is prefixed, and in two it follows. Once we have *ā ne* following, and once *er* or *ra*. In Akkadian *Le* is "bull." Other common words are *Gut* and *Khar*, both meaning "bull" in Akkadian. *Gut* is "bull" in Chinese, perhaps connected with the Tartar *Güt*, "mighty" (Vambery, p. 104). *Khar* is the Finnish *Kirjo*, Vogul *Kar*, *Khar*, *Ker*, *Kher*, *Kir*, "ox;" Tunguse *Sar*, Mongol *uker*, Hungarian *ökör*, "ox." If, as is very probable, this word existed in Hittite, the head may spell the words *Kharra* and *Kharrane*, meaning "high" or "heavenly."

Lo or *H.*—The first is Cypriote; the second, Carian. The emblem is the Cross, which in Chaldea and Etruria was a sacred emblem, and is held in the hand of a god on the so-called Hittite cylinders. It is usually supposed to be a sign of "life," like the Egyptian *ankh*. It only occurs twice. Compare the Akkadian *lu*, "man;" Zirianian *lō*, "spirit;" Tartar *ol*, "to live;" and for the second value the Akkadian *Khi*, "good;" Turkish ايي *eei;* Tartar *Khai*, "good."

Man or *Ma*, or *Gon.*—The hand with a sceptre. It only occurs twice. Perhaps connected with *Man*, Akkadian for "king;" also probably Etruscan. It is the Tartar *Mañ*, whence the Yakut *Mana*, "leader;" Finish *Vana*, "elder." *Gon* would mean the same.

Ma(n) or *Va(n)*, or *Ma* or *Va.*—This is a rare emblem, perhaps another kind of tiara.

Me.—This is a much conventionalised emblem, perhaps a hand. There are thirteen clear cases at Hamath, and one at Ibreez; but at Jerabis it seems to be replaced by a well drawn hand, occurring with the same group of emblems. As it is generally found at the end of texts or phrases, it would seem to represent a verb root. There is no case as yet in which it is prefixed. Compare the Akkadian *Ma*, "be;" Tartar *am*, *em*, *im*, "existing;" and the Turkish *me*, for names of actions.

Mi, *Me*, or *Ma*.—As already noticed, this is a common Turanian word for "country." Its existence in Akkadian is acknowledged by Lenormant, Delitzsch, and Pinches. (*See* Sayce, "Assyrian Grammar," No. 291, p. 25, *ma*, "to dwell," "plain," "country.") There are as yet only three clear cases of occurrence, one being on the bilingual, where it stands for "country." The emblem represents two mountain peaks.

Ra.—There are only two cases. The emblem occurs also on cylinders, and as I pointed out some time ago, this emblem, frequently found in Phœnicia, seems to be akin to the Egyptian ankh.

Re.—This emblem occurs about fifteen times. Perhaps to be compared with the root *Ri*, "shine" or "bright," in Akkadian representing rays of light descending, or as in cuneiform and Egyptian emblems representing "rain," from *Ri*, "flow."

Re.—A much rarer emblem seems to represent water dropping or pouring. Compare the root *Ri*, "flow;" Tartar *er*, *ir*, *ur*, "to flow," as already mentioned in Section 3.

Ri.—This emblem, which I have supposed to be perhaps the fire stick (*bil* or *bilgi*[1]), occurs on the Babylonian bowl as the name of a god. Compare the Akkadian deities *Ri* and *Ira*. It only occurs five times, in four instances of the same word, and in the case just mentioned. In Akkadian *Ar*, *Ir*, *Ur*, means "light," "fire," "heat;" the Tartar *yar*, *or*, *uor*, *ör*, "to gleam," "burn," "shine" (Vambery, No. 128, p. 117), and *Ri* means "light" or "brightness" in Akkadian.

Se.—The hand. There are only a few cases. Akkadian *Sa*, "put," "give," "have;" *Saa*, "favourable;" *Se*, *Si*, "give." Tartar *aja*, "the open hand" (j and s being convertible); *aj*, *ej*, "favourable;" *es*, "lucky" (Vambery, pp. 1, 3, 4), *saa*, *sau*, "to take" (p. 157).

Su.—There are only four cases. An arm holding some kind of stick or cord. Perhaps to be compared with the Akkadian *us*, "king;" Tartar *ös*, "lord;" *us*, "great;" *us*, "master" (Vambery, pp. 27, 57, 62).

Tar.—This emblem of the deer's head stands for Tar, or Tarku, on the bilingual. In Akkadian *Dar* or *Dara* means "deer." In Finnic we find *sordv*, "stag," from *sor*, "horn." There are about ten occur-

[1] *Gi* means "flame;" compare the Finnic *keo*, "hot," *kaila*, "flame," Tartar *köö*, "burn." *Bil* I propose to compare with the Tartar *bil*, "to rub" (Vambery, p. 198), so that Bilgi would mean flame made by rubbing with the firestick.

rences of this sign, once as the name of a deity (Tar or Tarku) on the Merash lion.

Ta.—The hand holding a stick. This is a rare emblem. On the Hamath stones it occurs, followed by *ne*. Compare the Akkadian *Da*, "drive;" *Tan*, "power;" Chinese *Ta*, "noble;" *Tan*, "hero;" Uigur *ite*, "master;" Cagataish *tay*, "power;" Finnic *tan*, *tun*, *ten*, "strong. (Donner, i, p. 143.)

Te.—Emblem an herb. Compare the Akkadian *Ti*, *Til*, *Tin*, "life;" *De*, "move;" Tartar *at*, "move;" *Tin*, "life" (Vambery, Nos. 27, 39, 186, 189); Turkish اتمك *itmek*, "to sprout," اوت *ot*, "herb." There are about 13 clear cases on the known monuments never apparently prefixed. The group *Ni-te-li* at Ibreez may mean "living." *Te ne* also occurs (Akkadian and Tartar *Tin*, "life").

To.—The hand in attitude of taking. There are only six clear cases. Compare Akkadian *tuk*, Medic *Duni*, "take," "give;" Etruscan *teke*, "give;" Tartar *Tek*, "touch" (Vambery, No. 173, p. 159); Finnic *Tuk*, "touch" (Donner, i, p. 109). The Akkadian *tu*, "make," is a common Ugric and Tartar root no doubt connected.

Tu.—The hand pointing downwards. There are only two clear cases, Akkadian *Tu*, "down," "descend," "death;" Turkish دون *doun*, "down," "below."

Vo.—A head on a stalk. Dr. Sayce renders it "pray," or "worship" (*kue*). It may have the value *gu*, and *Vo* (or *Mu*) as well. The emblem usually stands alone at or near the end of a packet, or of a text, so that it would seem to represent a verb. There are about 17 clear cases. As yet it is not found on any seal. Akkadian *Mu*, "name," "call;" *Me*, "speak." Tartar *oñ*, "cry" (the ringing *n* being often put for M. Vambery, No. 54, p. 49.) Akkadian *gu* and *ka*, "say," "word" (the K and M are often interchanged.) Tartar *ig*, *iau*, "cry;" *kui*, *kuj*, "voice" (Vambery, pp. 106, 129, 130). Finnic *kï*, "speech;" *juoi*, "call." (Donner, i, pp. 58, 102.) The combination *voka* or *guka* occurs five times ("word for," or "name for;" *Vo-me-ka*, three times ("words for," or "crying to,") and *Ne vo* (a verbal form), once, *Vo li* (or *gu-li*) the participle once, and *Mo-vo*, "I say," twice.

U or O.—Emblem, the firmament. Dr. Sayce calls it the emblem of supremacy. The sound here given is taken from a Carian emblem. Other possible sounds would be *ub*, *Pa*, and *Pak*. There are about twenty known cases, in thirteen of which it is a prefix. On the new Gurnun text it seems to occur several times above the emblem for deity.

Akkadian *u*, "day;" *ub*, "heaven;" *pa*, "sky," perhaps the Tartar *u*, *uv*, *up*, "curved"—the vault of heaven.

Zi or *Zo.*—Emblem, perhaps the lightning. The exact sound in Cypriote is doubtful. There are ten clear cases. In one instance it is the name of a god. Akkadian *Zu*, "live," "grow;" *Zi*, "life," "spirit," "flow;" Tartar *uz*, "grow," *Is*, *es*, *us*, *os*, "flow," "fly," "spirit." (Vambery, No. 40, p. 37, and p. 57.)

These lists do not exhaust the notes of comparison which I have collected, but are sufficient for the present purpose of showing how the sounds of the Hittite language may be recovered and compared. From the name lists we here recover 34 words, and several indications of grammar and from the texts themselves 40 roots, without counting derived words or compounds. I believe at least 100 Hittite words in all are recoverable from the materials at our command. It appears to me that it is necessary for those who may feel inclined to criticise these results,[1] not merely to select a word here or there, but either to show some radical fallacy underlying the system, or to give some alternative comparison capable of being better adapted.

I have reserved for the present the results of a careful comparison with cuneiform and with Egyptian. I believe in 38 cases, Hittite and Egyptian emblems have the same form and meaning, and out of these in 12 cases the same, or very nearly the same sounds. In 38 cases also the Hittite and cuneiform form may be compared, and in 18 cases out of these not only form and meaning, but sound also is the same—the sounds being of course independently obtained.

I agree with M. Bertin, and other scholars, in supposing that Hittite, cuneiform, and Egyptian, had a common origin in an ancient picture-writing system, from which the Chinese also developed. I believe this to have originated somewhere near the Caucasus among Turanian tribes, and to have been adapted to an African language in Egypt, just as to a Semitic language in Chaldea; but since the "weak roots" have independent emblems in the three systems, I think they must have separated and developed independently from a remote age before the orginal language had advanced to the agglutinative stage.

I further believe the Semitic alphabet to be demonstrably derivable from the Hittite emblems, the chief reason being the use in Carian and Lycian, &c., of a transitional system; for it is contrary to ordinary palæographical experience to suppose (as scholars are now obliged to do) that a mixed alphabet can have existed derived from two distinct sources.

C. R. Conder.

[1] The only criticisms as yet (by Dr. Sayce and others) have had respect to details. I have answered these fully in "Altaic Hieroglyphs" (second edition), and in *Palestine Exploration Fund Quarterly Statement*, 1887. I have modified former proposals in this paper in five cases, and have added nine new comparisons, increasing the number of sounds recovered from 31 to 40. Space does not allow of giving the lists which I have prepared, comparing Akkadian in about 400 cases with Tartar roots, in 200 with Turkish, in 70 with Medic, and in other cases with Ugric, Finnic, and Mongolic languages, and with Chinese and Etruscan. There are at least 150 Tartar words in Egyptian, and these, as a rule, occur in Akkadian also. My list of restored Hittite words exceeds 100 in all. The question of the comparison of the three hieroglyphic systems I hope to treat elsewhere in a separate paper. The question of the origin of the Alphabet is also published separately.

Corrections and Notes.

The proof of the "Hittite Language" having been submitted to various scholars for criticism, I have been favoured with their remarks on details, and add the results as far as they have reached me.

Bulug, "division," is regarded by M. Bertin and Prof. Sayce as a Semitic word. The root, however, is common in Turanian speech. *Zab*, "soldier," is also considered Semitic by M. Bertin.

Nautab is more correctly *Natub*, according to Rev. H. G. Tomkins, who also objects to *Kharab* (*Khalebu*), and to *Ganiab* (better *Kainab*). *Buresu* is otherwise read *Suresu*, but the inscription is here injured. *Tamakua* is perhaps more correctly *Tzemauka*.

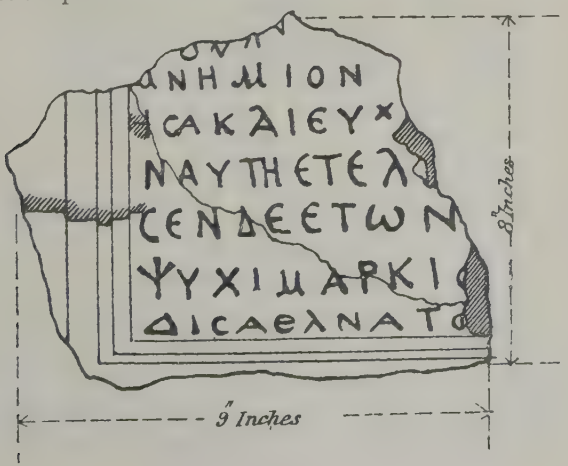
Li, given by Lenormant as an adjective termination, is not accepted by M. Bertin; *U* or *Ua*, "and," is read *Sa* by Prof. Sayce, but this is still apparently doubtful.

As regards the termination *meti*, in Hittite, I may add that *meta* occurs, meaning "being" in Akkadian (Bertin on "Assy. Pronouns," p. 19), which strengthens my case.

There is of course a good deal of doubt about some of the words given as Akkadian on the authority of Lenormant, Delitszch, and others. M. G. Bertin has kindly looked through these words, and doubts especially—*Pakh*, "king;" *Pis*, "hero;" *Zana*, "superior;" *alu*, "city" (probably Semitic); *us*, "King;" *Tu*, "down." He also reads *lu* for *le*, "bull,' and queries other words; but by the system used in this paper the uncertainties of Akkadian are often overcome. C. R. C.

RECENT DISCOVERIES.

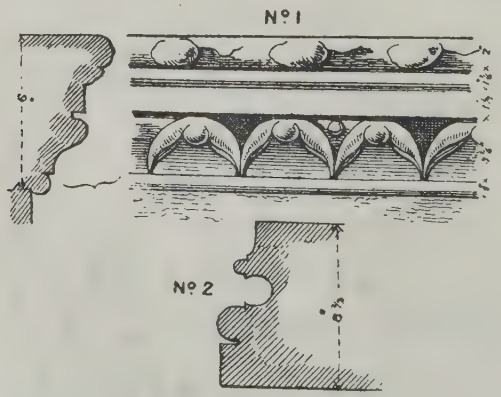
Lejjûn.—At Lejjûn, this ancient Roman place of the Merj ibn 'Amir (Plain of Esdraelon), the following Greek inscription was found, unfortunately not complete :—



The inscription is engraved on a soft white limestone, surrounded by a cornice.

Haifa.—At the west of the German colony at Haifa, near the modern Jewish cemetery, in an abandoned garden, covered with quicksand, several large sarcophagi covers of sandstone were discovered after the upper layers of the sand were transported on wagons to the gardens of the colony. The sarcophagi covers, herewith sketched, had an average length of 7 feet 1 inch, an exterior width of 2 feet 11 inches, and a height of 1 foot 11½ inches. The sarcophagi themselves, or rather the graves, were formed by nicely hewn sandstones of large size, up to 6 feet by 3 feet, and masoned together so as to form a grave of rectangular form, sufficient in size to be covered by the top slabs sketched. Each of the three top slabs had on each corner of its sloping top a horn, 11 inches high, 8 inches in diameter, which gave the whole a suitable ornamentation. The interior of the graves were somehow plastered with a good covering of white mortar. The workmen, who were busy in destroying these ancient remains and cutting them into building stones of such size as to be transportable on camel's back, pretended that they had also dug out human bones, which I saw no more. This place and vicinity (see "Memoirs of Palestine Exploration Fund, Haifa," Vol. vi, p. 303) must have been an ancient Jewish burial place, as seen from the data mentioned by Benjamin of Tudela, &c.

Kefr Kenna.—The annexed sketch, No. 1, represents an ornamentation found at Kefr Kenna by the Superior of the Latin Convent there; it is carved in the so-called Nâri (a soft crumbling lime) stone, and as so very



few ancient remains are found at this place, may be of some interest; No. 2 was also found here, and seems to be the attic base of a column, while No. 1 is the top of a crowning cornice.

Mâ-mâs.—At the Roman Theatre of Mâ-mâs, I found these **H R K** mason marks. The greatest part of this ruin is carried off and overbuilt.

Tiberias.—The surface of the Lake of Tiberias is 5 feet 1 inch *lower* than it was in February, when I marked its height on the city wall, at the time of heaviest rainfall. The inhabitants of the city are surprised of this low stand of the lake, it being the lowest since many years, and was caused by the dry season and the relative poor rainfall of last winter. The Jordan, near Bâb et Tumm, at its outflow out of the lake is only knee-deep, while in March last I crossed the river in a boat, measuring a maximum depth there of nearly 6½ feet. The springs also, throughout Galilee, but especially in the district of Tiberias, became unusually poor, and many dried up totally; so for instance, the large town of Lûbieh and of Nimrîn are obliged to get their entire water supply, since September last, from the powerful but distant spring of Hattîn, at a distance of 4 and 2 miles respectively. At Nazareth the want of drinking water becomes most urgent, as even the good supplying spring at Kerm el Emîr could no more answer the wants of thousands, not a drop being left any more to irrigate the gardens below. Foreigners, who were not happy enough to have friends, found nobody, not even for money, to water their animals. In Northern 'Ajlûn, where the cisterns became empty during September, and no spring was near, the want of water became a burning question. A Mukâri (muleteer), loaded with dry goods from Damascus, told me that he wandered about in Northern 'Ajlûn for three days without finding a place to water his animals, he himself suffering most terribly from thirst, as no villager allowed him to have a drink until he finally forcibly seized a "kirby" (leather bag) of water from an old woman to answer his wants. Considering that declining to hand a drink of water over to a stranger is about the last thing that is expected by an Arab, and is throughout considered as an action of the basest kind, the state of water wants in 'Ajlûn must have been very very high indeed. Several rainfalls during the last weeks have raised this question to a supportable degree.

Shefa 'Anir.—In the south of the town, just below the small castle, el Burj, and near where the officers of the "Fund" had found and described tombs, other tombs along the road were discovered. They were so well shut by stone doors that their existence had hitherto escaped the eye. They generally contain three to four koka, and show here and there on the walls Christian emblems and crosses. Human bones and copper bracelets, and some lachrymatories, are said to have been found, but carried off by a monk, who happened to be near at the time of discovery.

Athlît.—This crusading castle has been bought privately by H. E. the Governor-General of Syria, who intends to pull down the dirty fellahîn houses, and part of the ancient remains, and to rebuild a proper village, to drain the marshy land, and to cultivate gardens. While surveying this part I was surprised by the abundance of old cisterns along the low hills of Athlît, the large sandstone quarries (el Makatîyeh), and the remains of irrigation canals and basins within the jungles of "Tarfa" or Tamarisks. The total area of the property belonging to Athlît measures 54 feddans (among which 33 of cultivated soil), or each government feddan, measuring 200 dunnums, about 10,800 dunnums = 2,340 English acres. Many

ancient remains may be brought to daylight by this desirable act of civilisation.

Sŭrafand.—Last week fishermen from this village caught a young sea-calf in their nets while fishing in the sea and brought it ashore; the cries of the young animal soon attracted its mother, which also appeared and was killed by gunshots; this animal very seldom appears in this part of the Mediterranean, and I immediately sent for its remains, but, unfortunately, the young calf had since died, and the meat of the other was entirely eaten up by the villagers, who pretended it to be of the taste of the best salt-water fish. All I could obtain was part of the skin, a very smooth hair-skin, much finer than that of a cow, and speckled white and dark brown. The calf is called Kelb-bahr (sea-dog) by the natives.

Haurân.—I have just been informed that near es-Sunaneim, in Northern Haurân, near the Lejjâh, a great fight has taken place between the 'Arab-el Lejjâh Bedawîn and the Druses of Jebel Haurân. Government soldiers, well armed, numbering several hundreds, attacked the Druses, who had unfairly commenced the fight, and were naturally supported by the Bedawîn. Up to now about 150 Druses were killed, and about 300 wounded, the loss on the other side was not severe. As the Druses had also lately killed the young son of a Kurdian Emîr of Damascus, while the innocent boy took a ride on the Merj, an action which nearly gave way to a general rise among the Kurds of Damascus, the Government is severely considering the question of a large expedition to pacificate the revolting Druses of Haurân.

G. Schumacher.

Haifa, *November*, 1887.

Note.

A few days ago a friend, who is staying with me here, in the course of an excursion to the "place of burning" and the Tell el Kassîs, found, about 200 yards from the base of the mountain, on his way to the latter place, a chipped flint arrow-head. It was especially interesting to me, as the spot at which it was picked up is only about a mile from the "fort" which I discovered about four years ago, called El Kul'at, and which I observed at the time in my article on "The Khurbets of Carmel," bore all the appearance of a pre-historic period. As on the occasion of my previous visit, the day was closing in too rapidly to enable me to give it the attention it deserved, I re-visited the spot a few days ago, thinking that I might possibly come across some more flint implements; but these are curiosities which one never finds when one is looking for them. I took the opportunity of making a rough sketch of the fort, and of part of the ancient wall, which is composed of large unhewn stones laid upon one another. The circular area inside is 82 feet by 75. The position must have been a very strong one, as it presents a precipitous face to the plain, above which it is situated about 300 feet, while in

rear the flank of the mountain is quite inaccessible. It is connected with the mountain by a neck of land, on which are the remains of some ancient ruins, and is approached from the side.

I have also been able to decipher the only inscription I have yet found on Carmel; it is over a rock-tomb at Kh, Raktiyeh (*see* article on "Khurbets of Carmel," *Q.S.*, p. 30, 1884), and is as follows :—

"MAPEINOY MNHMEION,"

on the tomb of Marinos, evidently from the crosses cut below the name, a Christian. It is interesting as showing that until the conquest of Palestine by the Moslems, these rock-tombs were used by Christians.

LAURENCE OLIPHANT.

August 2nd.

BOAT-SHAPED GRAVES OF SYRIA.

In the *Quarterly Statement* for October, 1887, I described some boat-shaped graves which I saw in the Anti-Lebanon. In the *Quarterly Statement* for January, 1888, Captain Conder suggests that these graves should be compared with the anthropoid sarcophagi of Phœnicia, and with the wooden mummy cases in Egypt. "The form," he says, "follows that of the human body." If he means the form of the anthropoid graves of Phœnicia, why, of course it does; but if he means the form of the graves which I described, I must say distinctly that it does not. The form is boat-shaped, and not human-shaped. Captain Conder apparently has not seen the graves, and has not seen my drawings.

I observe also Captain Conder's present opinion, that "Charon was probably not connected with Horus, but with the Etruscan Charun, 'the black (or evil) god' of death." I did not mean to assert on my own authority that Charon was connected with Horus. I mentioned that a carnelian scarab found at Amrit, in Phœnicia, exhibits a ship with the sun above it, and letters which Perrot reads as Kheb, but which Captain Conder would read Kher and regard as the Semitic spelling of Horus. I said, also, that in the boat which was brought up to the lake side in the funeral ceremony in Egypt the boatman's name was Charon, and both Charon and his boat were adopted by the Greeks. This statement rests on the authority of Sir Gardner Wilkinson, who quotes Diodorus, and adds that both the name and character of Charon are taken from Horus, who had the peculiar office of steersman in the sacred boats of Egypt.

GEO. ST. CLAIR.

THE CITY OF DAVID AND ACRA.

In the *Quarterly Statement* for 1886, p. 27, I stated that Josephus described the part north of the Upper City (the Acra of Sir Charles Warren and Captain Conder) as the *suburb* (προάστειον), but I omitted to point out the evidence.

In reference to this part Josephus says (Wars v, iv, 2) that the second wall only encompassed the northern quarter (τὸ προσάρκτιον κλίμα). But again in reference to a particular part of Jerusalem, Josephus speaks of it as the northern quarter (τὸ προσάρκτιον) in Wars i, xiii, 3, but as the *suburb* in the parallel passage in the Ant. xiv, xiii, 4, thus identifying the two. With this agrees the statement in Ant. xv, xi, 5, that two of the *western* gates of the temple led to the *suburb*; inasmuch as the part north of the Upper City was on the *western* side of the temple.

Thus Josephus places the *suburb* north and the Acra east of the Upper City, on Ophel (so called, 1886, 27), hereby unconsciously admitting that Ophel was the site of the City of David. This is clear, since Josephus identifies his Acra with that of the Maccabees (Wars v iv, 1), which was the City of David (1. Macc. 1, 33), which was on Ophel (Old Test., 1885, 100). The City-of-David-question is really as clear as noon, and as easy as A, B, C, until Josephus' guesses at truth are weakly taken to be truth.

For critics in search of the true position of the City of David and Acra, it seems indeed an odd device to disregard entirely the Old Testament and to go to Josephus for its City of David, and to modern theorists for his Acra; instead of going to him for his Acra, and to it for its City of David. My topographical opponents are welcome to confide in Josephus or not, as they like; but it is nothing less than infatuation to *believe* him when he contradicts the Old Testament, writing of what he may have heard, read or thought, but certainly had not seen, and then to disbelieve him when he writes of what he had actually seen.

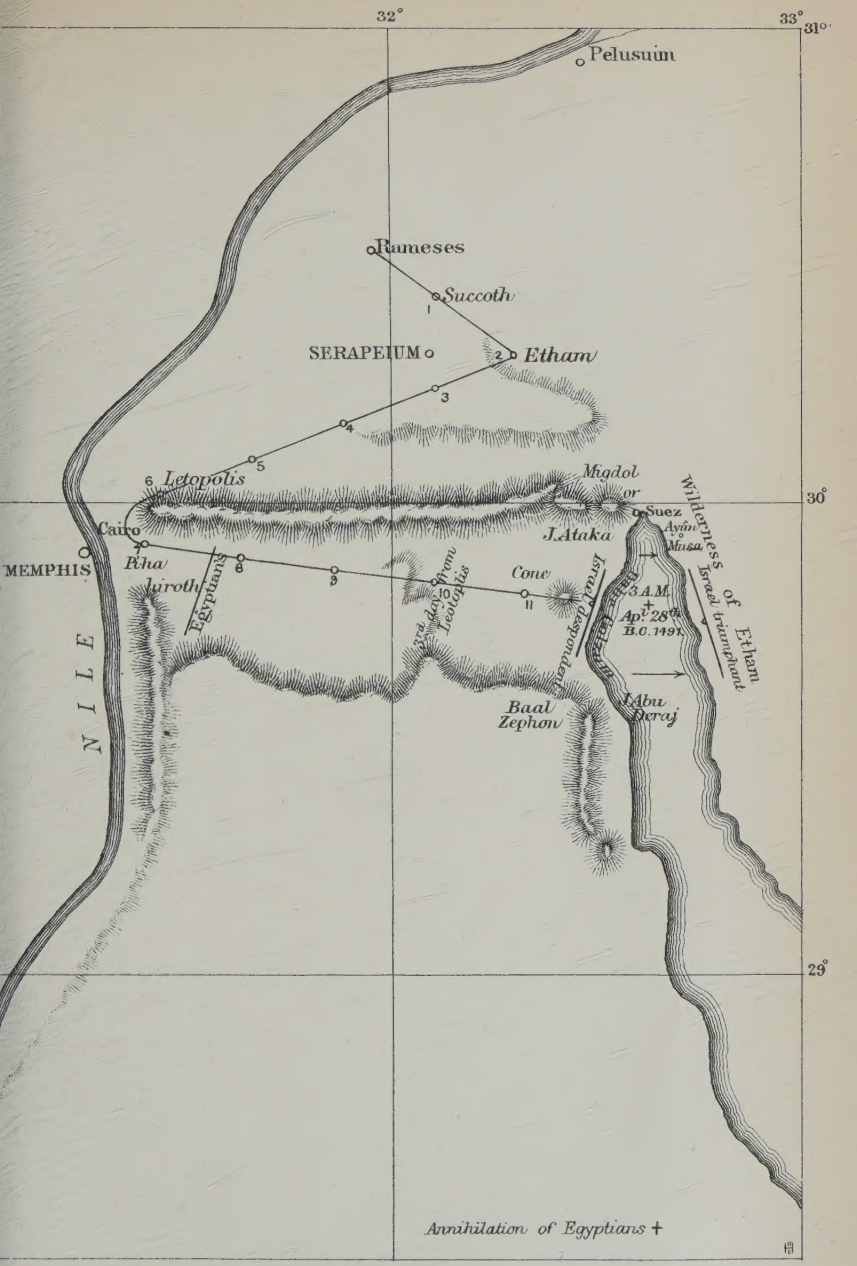
W. F. Birch.

ERRATA.

October, 1887.—Page 210, line 9, *for* Tibnite, *read* Tabnite.
" Page 210, line 15, *for* Dodorus, *read* Diodorous.
" Page 213, line 37, *for* 6 in plan, *read* b in plan.
" Pages 217, 218, *for* rock level 2411·6, *read* 2511·8.
" " " 2412· *read* 2512.
" " " 2414· *read* 2514.
" " " 2415· *read* 2515.
" Page 239, line 24, *for* Disopolis, *read* Diospolis.
" Page 240, line 14 from bottom, *for* Atakak, *read* Ataka.
" Page 240, line 4 from bottom, *for* then, *read* there.

October, 1887.—Page 241, top line, *for* sau, read san.
„ Page 241, line 24 from top, *for* Gen. 33, 37, *read* 17.
„ Page 241, line 31 from top, *for* Mirian *read* Hiram.
„ Page 241, line 31 from top, *for* 45 *read* 46.
„ Page 241, line 6 from bottom, *for* 20 *read* 30.
„ Page 242, line 13 from bottom, *for* Jabel *read* Jebel.
„ Page 243, line 6 from top, *for* Pita, *read* Piha.
„ Page 243, line 21 from top, *for* Pe, *read* Pi.
„ Page 244, line 2 from bottom, *for* Clyoma, *read* Clysma.
„ Page 245, line 18 from top, *for* xv, *read* xiv.
„ Page 245, line 4 from bottom, *for* 12, *read* 11.
January, 1888.—In the list of subscriptions, *for* C. White, *read* Edward White.
„ Page 22, line 7, *for* Waly Rephaim, *read* Wâdy Rephaim,
„ „ „ Bettis „ „ Bitîtr.
„ „ „ Iswain „ „ Ismâîn.
„ „ „ Sarar „ „ Sŭrâr.
„ „ line 8, *for* Arlouf „ „ 'Artûf.

ROUTE OF THE EXODUS.



Vincent Brooks Day & Son lith.

British Miles 69·1=1 Degree

10 5 0 10 20 30 40 50 100

Enlarged from Stanford's Smr. Ancient.